

**IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
MARSHALL DIVISION**

CALYPSO WIRELESS, INC., et al. §
§
v. § Case No. 2:08-CV-441-JRG-RSP
§
T-MOBILE USA, INC. §

**CLAIM CONSTRUCTION
MEMORANDUM AND ORDER**

On September 10, 2012, the Court held a hearing to determine the proper construction of the disputed claim terms in United States Patent No. 6,680,923. After considering the arguments made by the parties at the hearing and in the parties' claim construction briefing (Dkt. Nos. 201, 213, and 220), the Court issues this Claim Construction Memorandum and Order.

Table of Contents

BACKGROUND	3
APPLICABLE LAW	4
CONSTRUCTION OF AGREED TERMS	7
CONSTRUCTION OF DISPUTED TERMS	7
A. “a computer configured for computerized network access” (Claims 1-5, 16-23, 24, 25 & 27)	8
B. “over-the-air network” (All Claims)	9
C. “unique identifier” (Claims 1, 6-9, 16-23 & 27)	12
D. “auto-switching capability” & “auto-switching switching capability” (Claims 1-5, 6-9, 16-23, 24-25 & 27) .	16
E. “automatically” (Claims 4, 11 & 19-22).....	21
F. “dependent on the establishment of said [p]redetermined parameters” (Claims 1-5, 6-9, 16-23, 24-25 & 27).27	27
G. “pre-establish[ed] vicinity range” & “preestablished vicinity range” (All Claims)	32
H. “communicative recognition between said computer and said wireless communication device within said pre-established vicinity range” (Claims 4-5).....	47
I. “messaging communication” (Claims 6-9 & 11-15)	50
J. “Internet access facility” & “Internet access facilities” (Claims 6-9 & 11-15)	57
K. “scanner capability” (Claims 7-9).....	58
L. “conducting a scan” (Claim 14).....	61
M. “scanning capability” (Claims 24-25)	62
N. “continuous searching” (Claims 8 & 24-25)	63
O. “wireless communication device comprising a pager assembly” (Claims 16-23).....	68
P. “alphanumeric pager” (Claim 23).....	76
CONCLUSION	77

BACKGROUND

Plaintiffs Calypso Wireless, Inc., Drago Daic, and Jimmy Williamson, P.C. (collectively, “Plaintiffs”) assert United States Patent No. 6,680,923 (“the ‘923 Patent”), which is titled “Communication System and Method,” against Defendant T-Mobile USA, Inc. (“T-Mobile”).

The abstract provides the following succinct description of the subject matter of the ‘923 patent:

A system and method for establishing communication with any one of a variety of different wireless communication devices including through the provision of a short range transceiver assembly so as to provide data communication from a sender to the wireless communication device either over the Internet, utilizing an Internet access facility, such as a computer, or alternatively using an over-the-air network, compatible with the communication device. The wireless communication device is structured to operate on either of at least two independent frequencies for communication with the computer or with the over-the-air network, dependent on predetermined parameters including the acceptance of a unique identifier or code and/or the positioning of the wireless communication device, within a predetermined vicinity range relative to the computer. An auto switching capability establishes data communication with the computer or with the over-the-air network, dependent on whether the identification and vicinity parameters have been met.

The ‘923 Patent was the subject of an ownership dispute among the Plaintiffs. *See, e.g.*, Joint Stipulation, Dkt. No. 111; Order, Dkt. No. 146 at 2; Emergency Joint Unopposed Motion to Stay, Dkt. No. 170. For purposes of the present claim construction, however, Plaintiffs all join in the briefing filed by Drago Daic. *See* Dkt. No. 202.

Claim 1 of the ‘923 Patent is representative of the asserted claims and recites the following elements (disputed terms in italics):

1. A hybrid communication system for wireless data communication said system comprising:

- a) a *wireless communication device* including a *unique identifier* and capable of conducting data communication through an *over-the-air network*,
- b) a computer configured for computerized network access,
- c) a transceiver assembly operative on a short range communication standard and structured to interconnect said wireless communication device with a computer facility to establish data communication therewith,
- d) said transceiver assembly including a first transceiver connected to said computer and at least a second transceiver connected to said *wireless communication device* and an *auto-switching capability* responsive to pre-determined parameters,
- e) said *auto-switching capability* being determinative of data communication with said wireless communication device either over the computerized network through said computer facility or by the *over-the-air network dependent on the establishment of said [p]redetermined parameters*, and
- f) at least one of said predetermined parameters comprising a *pre-established vicinity range*.

APPLICABLE LAW

“It is a ‘bedrock principle’ of patent law that ‘the claims of a patent define the invention to which the patentee is entitled the right to exclude.’” *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312 (Fed. Cir. 2005) (en banc) (quoting *Innova/Pure Water Inc. v. Safari Water Filtration Sys., Inc.*, 381 F.3d 1111, 1115 (Fed. Cir. 2004)). To determine the meaning of the claims, courts start by considering the intrinsic evidence. *See id.* at 1313; *C.R. Bard, Inc. v. U.S. Surgical Corp.*, 388 F.3d 858, 861 (Fed. Cir. 2004); *Bell Atl. Network Servs., Inc. v. Covad Commc’ns Group, Inc.*, 262 F.3d 1258, 1267 (Fed. Cir. 2001). The intrinsic evidence includes the claims themselves, the specification, and the prosecution history. *See Phillips*, 415 F.3d at 1314; *C.R. Bard, Inc.*, 388 F.3d at 861. Courts give claim terms their ordinary and accustomed meaning as understood by one of ordinary skill in the art at the time of the invention in the context of the

entire patent. *Phillips*, 415 F.3d at 1312-13; *Alloc, Inc. v. Int'l Trade Comm'n*, 342 F.3d 1361, 1368 (Fed. Cir. 2003).

The claims themselves provide substantial guidance in determining the meaning of particular claim terms. *Phillips*, 415 F.3d at 1314. First, a term's context in the asserted claim can be very instructive. *Id.* Other asserted or unasserted claims can aid in determining the claim's meaning because claim terms are typically used consistently throughout the patent. *Id.* Differences among the claim terms can also assist in understanding a term's meaning. *Id.* For example, when a dependent claim adds a limitation to an independent claim, it is presumed that the independent claim does not include the limitation. *Id.* at 1314-15.

"[C]laims 'must be read in view of the specification, of which they are a part.'" *Id.* (quoting *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 979 (Fed. Cir. 1995) (en banc)). "[T]he specification 'is always highly relevant to the claim construction analysis. Usually, it is dispositive; it is the single best guide to the meaning of a disputed term.'" *Id.* (quoting *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996)); *Teleflex, Inc. v. Ficosa N. Am. Corp.*, 299 F.3d 1313, 1325 (Fed. Cir. 2002). This is true because a patentee may define his own terms, give a claim term a different meaning than the term would otherwise possess, or disclaim or disavow the claim scope. *Phillips*, 415 F.3d at 1316. In these situations, the inventor's lexicography governs. *Id.* The specification may also resolve the meaning of ambiguous claim terms "where the ordinary and accustomed meaning of the words used in the claims lack sufficient clarity to permit the scope of the claim to be ascertained from the words alone." *Teleflex*, 299 F.3d at 1325. But, "[a]lthough the specification may aid the court in interpreting the meaning of disputed claim language, particular embodiments and examples appearing in the

specification will not generally be read into the claims.” *Comark Commc’ns, Inc. v. Harris Corp.*, 156 F.3d 1182, 1187 (Fed. Cir. 1998) (quoting *Constant v. Advanced Micro-Devices, Inc.*, 848 F.2d 1560, 1571 (Fed. Cir. 1988)); *see Phillips*, 415 F.3d at 1323. The prosecution history is another tool to supply the proper context for claim construction because a patent applicant may also define a term in prosecuting the patent. *Home Diagnostics, Inc., v. Lifescan, Inc.*, 381 F.3d 1352, 1356 (Fed. Cir. 2004) (“As in the case of the specification, a patent applicant may define a term in prosecuting a patent.”).

Although extrinsic evidence can be useful, it is “less significant than the intrinsic record in determining the legally operative meaning of claim language.” *Phillips*, 415 F.3d at 1317 (quoting *C.R. Bard*, 388 F.3d at 862). Technical dictionaries and treatises may help a court understand the underlying technology and the manner in which one skilled in the art might use claim terms, but technical dictionaries and treatises may provide definitions that are too broad or may not be indicative of how the term is used in the patent. *Id.* at 1318. Similarly, expert testimony may aid a court in understanding the underlying technology and determining the particular meaning of a term in the pertinent field, but an expert’s conclusory, unsupported assertions as to a term’s definition are entirely unhelpful to a court. *Id.* Generally, extrinsic evidence is “less reliable than the patent and its prosecution history in determining how to read claim terms.” *Id.*

CONSTRUCTION OF AGREED TERMS

The parties have agreed to the construction of the following terms:

Claim Term	Agreed Construction
“wireless communication device”	“a pager, cellular telephone, personal digital assistant (PDA) or other applicable wireless communication device structured and designed to perform data communication”
“data communication”	“communication of voice, video, alphanumeric, or other data”
“a first transceiver”	“a combination transmitter and receiver”
“a second transceiver”	“a combination transmitter and receiver distinct from the first transceiver”
“predetermine parameters”	“predetermined parameters”
“multi-frequency wireless communication device”	“a wireless communication device operating on at least two distinct radio frequencies”
“multi-line communication capabilities”	“capabilities of communicating on at least two distinct radio frequencies”
“pre-established said vicinity range”	“said pre-established vicinity range”
“said vicinity range”	“said pre-established vicinity range”

Joint Claim Construction and Prehearing Statement, Dkt. No. 167, Attach. 1.

In view of the parties’ agreements on the proper construction of each of the identified terms, the Court hereby **ADOPTS AND APPROVES** the parties’ agreed constructions.

CONSTRUCTION OF DISPUTED TERMS

As a preliminary matter, Plaintiffs have objected in their August 28, 2012 reply brief that T-Mobile’s August 21, 2012 response brief changed its proposed constructions as to at least ten disputed terms. Dkt. No. 220 at 1. Plaintiffs submit this is a violation of Local Patent Rule 4-3(b), which requires advance disclosure of proposed constructions and supporting evidence.

Id. Plaintiffs argue they have been prejudiced by “only hav[ing] the very limited time available for responding in conjunction with Plaintiffs’ reply brief.” *Id.* On one hand, Plaintiffs had only one week to prepare a written reply to T-Mobile’s revised proposed constructions. On the other hand, Plaintiffs then had an additional 13 days to prepare for oral argument on September 10, 2012, and during the hearing Plaintiffs did not address their objection at all. Moreover, T-Mobile’s revised proposals have generally removed issues from dispute or otherwise adopted portions of Plaintiffs’ proposals. On balance, the prejudice to Plaintiffs, if any, is minimal, and T-Mobile’s efforts to resolve disputes and minimize the number of issues requiring Court action should not be discouraged. Plaintiffs’ objection is therefore overruled.

A. “a computer configured for computerized network access” (Claims 1-5, 16-23, 24, 25 & 27)

Plaintiffs’ Proposed Construction	T-Mobile’s Proposed Construction
<p>The Court should resolve the parties’ dispute over this language by ruling as follows:</p> <p>This phrase does not require or exclude a computer configured by appropriate programming of the first and second transceivers to access the computerized network</p>	<p>Plain meaning</p>

T-Mobile originally proposed this term means: “A computer configured by the appropriate programming of the first and second transceivers to access the computerized network.” Dkt. No. 167, Attach. 2 at 1. Plaintiffs originally proposed that no construction is necessary. Dkt. No. 201 at 6. In its responsive brief, T-Mobile states that it “believes, after reviewing Plaintiffs’ brief, that there is no real dispute as to ‘a computer configured for computerized network access’ or ‘Internet Access Facility,’ and therefore agrees that those terms

do not require construction.” Dkt. No. 213 at 5 n.1. In its reply brief, Plaintiffs request a ruling that the construction originally proposed by T-Mobile is *not* a limitation. Dkt. No. 220 at 7.

Plaintiffs present no substantive argument other than to request that T-Mobile’s prior proposed construction be “not require[d] or exclude[d].” Dkt. No. 220 at 8. At the September 10, 2012 hearing, T-Mobile stated that it does not intend to assert that this claim term requires a computer configured by appropriate programming of the first and second transceivers to access the computerized network.

The Court accordingly construes “**a computer configured for computerized network access**” to have its plain and ordinary meaning. The Court finds that the term does not require a computer configured by appropriate programming of the first and second transceivers to access the computerized network.

B. “over-the-air network” (All Claims)

Plaintiffs’ Proposed Construction	T-Mobile’s Proposed Construction
“paging and/or cellular infrastructure, satellite communication or other applicable communication network”	“cellular, paging, satellite, and/or other applicable wireless communication network” ¹

Plaintiffs submit that the patentee acted as his own lexicographer by defining “over-the-air network” in the specification. Dkt. No. 201 at 8-9. Plaintiffs argue that “T-Mobile’s proposed construction and the inclusion of the disjunctive ‘or’ [(in T-Mobile’s original

¹ T-Mobile previously proposed that this term means: “Cellular, paging, satellite, or other applicable communication network.” Dkt. No. 167, Attach. 2 at 3. T-Mobile revised its proposed construction to replace “or” with “and/or” in response to Plaintiffs’ concern that “or” might be read as an “exclusive or,” that is, as meaning one or the other but not both. Dkt. No. 213 at 28 n.18. T-Mobile’s new proposal also requires that the communication network be “wireless” in order “to further clarify the term for the jury.” *Id.*

proposal)] limits the communication network to one particular form of network, such that the network is either cellular or paging or satellite, but not a combination.” *Id.* at 9. “Further,” Plaintiffs argue, “T-Mobile’s proposed construction denies the possibility that paging functionality could occur over a cellular network.” *Id.* at 9.

T-Mobile responds that there is no dispute about the meaning or scope of the term in substance, but T-Mobile “seeks to clarify” Plaintiffs’ opened-ended proposal by including that “the ‘other applicable’ network is a wireless ‘communication network,’ just as ‘cellular, paging, and satellite’ networks are wireless communication networks.” Dkt. No. 213 at 28-29.

Plaintiffs reply by citing their opening arguments and submitting that their proposal “is more appropriate as it is more broadly worded.” Dkt. No. 220 at 18.

“[T]he specification may reveal a special definition given to a claim term by the patentee that differs from the meaning it would otherwise possess. In such cases, the inventor’s lexicography governs.” *Phillips*, 415 F.3d at 1316. An inventor is permitted to define the terms of his claims “[s]o long as the meaning of an expression is made reasonably clear and its use is consistent within a patent disclosure.” *Intelicall, Inc. v. Phonometrics, Inc.*, 952 F.2d 1384, 1388 (Fed. Cir. 1992) (quoting *Lear Siegler, Inc. v. Aeroquip Corp.*, 733 F.2d 881, 889 (Fed. Cir. 1984)). The specification mentions an “over-the-air network” in several instances:

. . . an over-the-air network such as, but not limited to, a cellular/paging network satellite communication and other applicable types of communication networks.

* * *

Alternatively, the auto-switching capabilities of the present invention establishes [sic] data communication by means of a compatible over-the-air network, such as an appropriate paging/cellular network, satellite communication, etc. . . .

* * *

. . . a paging/cellular infrastructure, which may define a compatible over-the-air network.

* * *

The over-the-air network can be defined by any compatible paging and/or cellular infrastructure, satellite communication 17 or other appropriate communication facilities, dependent on the type of wireless communication device 10 being utilized and a variety of other related factors.

* * *

As set forth above, the over-the-air network may be defined by appropriate cellular/pager infrastructure, including server 18 or other communication networks such as, but not limited to, satellite communication 17 and others.

* * *

. . . an appropriate, compatible over-the-air network such, as a cellular/paging, satellite or other appropriate network . . .

* * *

. . . a compatible over-the-air network 14, such as, but not limited to a cellular, or paging network infrastructure and/or server 18 or other appropriate over-the-air network, such as satellite communication.

‘923 Patent at 2:27-29 (Summary of the Invention), 3:31-35 (same), 3:53-55 (same), 5:1-5 (Detailed Description of the Preferred Embodiment), 7:10-14 (same), 7:55-57 (same) & 8:28-31 (same).

On balance, these usages of “over-the-air network” in the specification, which are replete with qualifying language like “can,” “may,” “such as,” and “but not limited to,” are not “reasonably clear” and “consistent” so as to constitute a lexicography. *Intellicall*, 952 F.2d at 1388. This qualifying language distinguishes the present case from other cases, such as those cited by Plaintiffs, where courts have found a lexicography. See, e.g., *3M Innovative Props. Co. v. Avery Dennison Corp.*, 350 F.3d 1365, 1369 (Fed. Cir. 2003) (specification stated “‘multiple embossed’ means two or more embossed patterns are superimposed on the web”); *Astrazeneca AB, Aktiebolaget Hassle, KBI-E, Inc. v. Mut. Pharm. Co.*, 384 F.3d 1333, 1339-40 (Fed. Cir.

2004) (description stated that terms were “defined below”); *Martek Biosciences Corp. v. Nutrinova, Inc.*, 579 F.3d 1363, 1380-81 (Fed. Cir. 2009) (patentee “explicitly defined the term ‘animal’” where the patent stated that “‘animal’ means any organism belonging to the kingdom Animalia”).

As to the proper construction, Plaintiffs’ proposal of including “or other applicable communication network” is amorphous and potentially overbroad because the constituent term “over-the-air,” on its face, requires a wireless network. Further, at the September 10, 2012 hearing, the Court stated its preliminary position that an “over-the-air network” must be wireless, and the Court asked whether the term “wireless” carries any connotation that would be a problem for Plaintiffs. Plaintiffs responded that it does not. The Court therefore adopts T-Mobile’s proposal, which properly limits the term to wireless networks.

As to whether “paging functionality could occur over a cellular network,” that dispute does not appear to be relevant to the construction of the term “over-the-air network” in general but instead is addressed as to the “pager” terms in subsections O. and P., below.

The Court accordingly hereby construes **“over-the-air network”** to mean **“cellular, paging, satellite, and/or other applicable wireless communication network.”**

C. “unique identifier” (Claims 1, 6-9, 16-23 & 27)

Plaintiffs’ Proposed Construction	T-Mobile’s Proposed Construction
No construction necessary — plain meaning. Alternatively, “a unique identifier or code associated with the wireless communication device”	“a unique identifier or code of the wireless communication device”

Plaintiffs submit that T-Mobile’s proposal “narrowly defines the unique identifier or code as being *of* the wireless communication device” rather than being “associated” with it, as

Plaintiffs propose. Dkt. No. 201 at 10 (citing ‘923 Patent at 1:15-18 & 2:65-3:3). For example, Plaintiffs argue that T-Mobile’s proposal would exclude a disclosed embodiment that “describes the unique identifier as potentially being implemented as a password or personal identification number (‘PIN’) being inputted by the device user in response to an authentication prompt.” *Id.* at 10-11.

T-Mobile responds that Plaintiffs’ “use of the amorphous phrase ‘associated with’ would allow their construction to encompass identifiers pertaining to other components in the system.” Dkt. No. 213 at 29. T-Mobile urges that “the claims make clear that the ‘unique identifier’ is the identifier of the wireless device and not some other component of the system.” *Id.* T-Mobile also notes that the “unique identifier” is never disclosed in the specification as being “associated with any component of the system other than the wireless communication device.” *Id.* at 30. Finally, T-Mobile submits that its proposed construction would not exclude Plaintiffs’ hypothetical embodiment where the unique identifier is “a password or personal identification number (‘PIN’) being inputted by the device user in response to an authentication prompt.” *Id.* (quoting Dkt. No. 201 at 11).

Plaintiffs reply by reiterating that the “unique identifier” is “associated” with the wireless communication device and is “not necessarily located in, or installed, programmed or embedded into the wireless communication device.” Dkt. No. 220 at 18. Plaintiffs conclude that because this association is already present in the claims, the term “unique identifier” requires no construction. *Id.* at 18-19.

Although Plaintiffs argue that this term should not be construed, the briefing demonstrates that the parties have a “fundamental dispute regarding the scope of a claim term,”

and the Court has a duty to resolve the dispute. *O2 Micro Int'l Ltd. v. Beyond Innovation Tech. Co.*, 521 F.3d 1351, 1362-63 (Fed. Cir. 2008). Parts of the specification describe the unique identifier as being “associated with” the wireless communications device. For example, the field of the invention states that “predetermined parameters, which may include the pre-established vicinity range and recognition of a unique identifier *associated with* at least the wireless communication device.” ‘923 Patent at 1:15-18 (emphasis added). Similarly, the summary of the invention states that: “The unique identifiers *associated with* each of the plurality of wireless communication devices are unique onto [sic] themselves and serve as an identifying code to any one of the appropriately programed or configured first transceivers associated with different ones of the plurality of computers.” *Id.* at 2:65-3:3 (emphasis added); *see also id.* at 3:60.

However, the claim language requires that the “unique identifier” be a part of the wireless communication device. Claims 1, 6, 16, and 27 recite (emphasis added) a “wireless communication device *including* a unique identifier” or a “plurality of wireless communication devices *each including* a unique identifier.” This reading is consistent with the use of “including” elsewhere in claim 1, for example, which recites in relevant part (emphasis added): “d) said transceiver assembly *including* a first transceiver connected to said computer and at least a second transceiver connected to said wireless communication device and an auto-switching capability responsive to pre-determined parameters.” *See Rexnord Corp. v. Laitram Corp.*, 274 F.3d 1336, 1342 (Fed. Cir. 2001) (“[A] claim term should be construed consistently with its appearance in other places in the same claim or in other claims of the same patent.”); *cf. Research Plastics, Inc. v. Fed. Packaging Corp.*, 421 F.3d 1290, 1295 (Fed. Cir. 2005) (“[C]laim terms are presumed to be used consistently throughout the patent, such that the usage of a term in

one claim can often illuminate the meaning of the same term in other claims.”); *Omega Eng’g, Inc., v. Raytek Corp.*, 334 F.3d 1314, 1334 (Fed. Cir. 2003) (“[W]e presume, unless otherwise compelled, that the same claim term in the same patent or related patents carries the same construed meaning.”). That is, this usage of “including” to recite that the first transceiver and the second transceiver are part of the transceiver assembly suggests that the phrase “wireless communication device including a unique identifier” means that the unique identifier is part of the wireless communication device, as T-Mobile has proposed.

Portions of the specification also support this reading. The specification includes the following discussion of a “unique identifier (password, PIN, etc.)”:

Also in this embodiment wherein a Bluetooth or similar transceiver is utilized, authentication and encryption is preferably provided in its baseband protocol. For example, the authentication may rely on a challenge/response protocol utilizing a *unique identifier (password, PIN, etc.)*. Two devices communicating with one another within the appropriate or pre-established vicinity range must *contain or have recognition of the same unique identifier*. This protocol allows each device to authenticate the other, automatically. After the devices are authenticated it is possible to encrypt transmission for added security.

* * *

Each of the wireless communication devices 10 may also include a unique identifier or “code” to facilitate recognition between the first and second transceiver chips 19 and 21. . . . [T]he unique identifier may define one of a plurality of predetermined parameters, more specifically referred to as an identification parameter, utilized to establish messaging communication with appropriate ones of a plurality of wireless communication devices 10.

Id. at 5:54-64 (emphasis added) & 6:34-42 (emphasis added); *see also id.* at 2:49-51 (“each of the plurality of wireless communication devices *include[s]* a unique identifier or code capable of being recognized by another compatible transceiver”) (emphasis added).

The Court finds that T-Mobile has the better construction because it fits the claim language and is supported by the specification. The Court accordingly hereby construes “**unique identifier**” to mean “**a unique identifier or code of the wireless communication device.**” The Court also finds that a unique identifier may comprise a password or “PIN” entered on the device,² and the Court finds that the unique identifier or code may be provided by a component of the wireless communication device.

D. “auto-switching capability” & “auto-switching switching capability” (Claims 1-5, 6-9, 16-23, 24-25 & 27)

Plaintiffs’ Proposed Construction	T-Mobile’s Proposed Construction
“the ability to determine whether data communication with the wireless communication device occurs over the computerized network or by the over-the-air network”	“capability to determine and automatically switch” ³

Plaintiffs argue that “[T-Mobile’s] proposal implies and could be interpreted as requiring the ‘auto-switching capability’ to provide the path for or conduct the routing of the actual communications, rather than determining whether communication will occur over the connection

² At the September 10, 2012 hearing, Plaintiffs re-urged that T-Mobile’s proposal of the word “of” might be read to exclude an identifier that is inputted into the device by the user, such as in the above-cited “password” or “PIN” embodiment. T-Mobile responded that the “unique identifier” must identify the device, and admitted that a password entered by a user may meet this requirement.

³ T-Mobile previously proposed this term means “capability of the transceiver assembly to automatically route communication over the computerized network or the over-the-air network.” Dkt. No. 167, Attach. 2 at 11. T-Mobile submits that it modified its proposal to “reduce the issues for the Court to resolve.” Dkt. No. 213 at 13 n.9. T-Mobile maintains that its revised proposal “still includes the more important aspect of the ‘auto-switching capability’ functionality, which is the switching itself, specifically the establishing, providing, or transferring (collectively synonymous with ‘routing’) of the connection itself to either the computerized network or the over-the-air network.” *Id.* at 13-14 n.9.

between the wireless communication device and either an appropriate over-the-air network or computer (Internet) access facility.” Dkt. No. 201 at 12.

T-Mobile responds that it has revised its proposed construction “[i]n order to reduce the issues for the Court to resolve,” but T-Mobile maintains that Plaintiffs’ proposal reads “auto” and “switching” out of the term and that “the claims themselves make clear that the auto-switching capability of the transceiver assembly is capable of *both* determining which network to connect with *and* establishing that connection.” Dkt. No. 213 at 14. T-Mobile also urges that “the specification teaches that the auto-switching capability actually *establishes* communication between the device and the over-the-air network, and does not simply *determine* the network to be used.” *Id.* at 15 (citing ‘923 Patent at Abstract, 1:13-19, 3:22-37, 3:44-48, 7:4-10 & 8:9-22). Finally, T-Mobile submits that the second half of Plaintiffs’ proposed construction is redundant with other claim language and should therefore be omitted from the Court’s construction. *Id.* Plaintiffs reply that the reference to “capability” in T-Mobile’s proposal is vague and confusing, and Plaintiffs reiterate that there is no requirement for any capability to “determine.” Dkt. No. 220 at 11.

The parties agree that “auto-switching capability” and “auto-switching switching capability” should be given the same construction. Dkt. No. 213 at 14; Dkt. No. 220 at 10 n.3. Claim 1’s use of the term “auto-switching capability” is representative of the other asserted claims and recites in relevant part (emphasis added):

1. A hybrid communication system for wireless data communication said system comprising:
 - a) a wireless communication device . . . capable of conducting data communication through an over-the-air network,
. . .

- c) a transceiver assembly operative on a short range communication standard and structured to interconnect said wireless communication device with a computer facility to establish data communication therewith,
- d) said transceiver assembly including a first transceiver connected to said computer and at least a second transceiver connected to said wireless communication device and an *auto-switching capability* responsive to pre-determined parameters,
- e) said *auto-switching capability being determinative of data communication* with said wireless communication device either over the computerized network through said computer facility or by the over-the-air network dependent on the establishment of said [p]redetermined parameters

The “auto switching capability” is variously disclosed in the specification as establishing communication, providing for communication, or determining the route of communication (emphasis added):

An *auto switching capability establishes data communication* with the computer or with the over-the-air network, dependent on whether the identification and vicinity parameters have been met.

* * *

The system includes *auto-switching capabilities for determining the route of communication* with the wireless communication device dependent, at least in part, on predetermined parameters, which may include the pre-established vicinity range and recognition of a unique identifier associated with at least the wireless communication device.

* * *

The communication system and method of *the present invention also incorporates auto-switching capabilities, wherein data communication is automatically established* with the access facility when at least one, or both of the aforementioned predetermined parameters (vicinity range and identification) have been established and wherein a first transceiver associated with the Internet access facility and the second transceiver associated with the wireless communication device are configured to recognize and accept one another to establish such communication. Alternatively, the *auto-switching capabilities of the present invention establishes [sic] data communication* by means of a compatible over-the-air network, such as an appropriate paging/cellular network, satellite communication, etc. when either

or both of the predetermined parameters between a given access facility and a corresponding wireless communication device are not met

However, when the wireless communication device is disposed beyond the established vicinity range, the *auto-switching capabilities will automatically provide for data communication* with the wireless communication device by means of the over-the-air network, as set forth above.

* * *

[O]nce the communication device 10 wanders outside of the pre-established vicinity range of the piconet 24 an *auto-switching capability* associated with the system and method of the present invention preferably, but not necessarily, *automatically establishes communication* between the wireless communication device 10 and the over-the-air network 14.

* * *

[I]f no computer can be located, the *auto-switching capability* is again operative to *transfer data communication* to an appropriate or compatible over-the-air network 14, as at 44. However, if computer 20 is configured to access the computerized network 12, data communication is thereby established as at 46, wherein voice, video, alphanumeric or other data may be sent or received by virtue of the piconet 24, over the computerized network 12, utilizing the network service provider 15. If the connection is lost as at 48, the *auto-switching capability* returns to the scanning capabilities as at 49, 44 to continuously search for a compatible Internet access facility or computer 20 or alternatively *switches to communication* with an over-the-air network, as at 34.

Abstract, 1:13-19 (Field of the Invention), 3:22-38 (Summary of the Invention), 3:44-48 (same), 7:4-10 & 8:9-22.

The Court is persuaded that the phrase “auto-switching capability being *determinative* of data communication” in claim 1, analyzed in the context of the claim and the above-quoted passages from the specification, would be understood by a person of ordinary skill in the art to refer only to determining whether data communication occurs either over a short range network or over an over-the-air network. In other words, the “auto-switching capability” is not responsible for conveying the communication but rather operates to select which network is to be

used for communication. T-Mobile's proposal, by contrast, would effectively read in a limitation that the "auto-switching capability" must itself "route" the communication, as T-Mobile originally proposed. Dkt. No. 167, Attach. 2 at 11. T-Mobile's proposal is therefore rejected.

At the September 10, 2012, the Court proposed construing "auto-switching capability" to mean the "ability to automatically direct whether data communication with the wireless communication device occurs over the computerized network or over the over-the-air network." Plaintiffs were agreeable to this proposal, but T-Mobile argued that its proposal of including "automatically switch" in the construction would be more accurate. T-Mobile cited deposition testimony by Plaintiffs' technical expert, Dr. Ahmed Tewfik, explaining that "auto-switching would include the ability to determine whether you would use one network or the other, and then the ability to actually use the one network that is selected." Dkt. No. 235-1, 9/5/2012 Tewfik dep. at 219:11-14.

On balance, the Court finds that "automatically determine" better comports with the above-quoted intrinsic evidence, which discloses the "auto-switching capability" as "determining the route of communication," "establish[ing] communication," "provid[ing] for data communication," and "transfer[ring] data communication." '923 Patent at 1:13-19 (Field of the Invention), 3:22-38 (Summary of the Invention), 3:44-48 (same), 7:4-10 & 8:9-22. In particular, these disclosures encompass causing the communication to change from being carried over one network to being carried over a different network, as Plaintiffs have argued. Such a construction will also better clarify the claim scope and be more helpful to the jury than simply repeating a portion of the disputed term in the construction of the term, as T-Mobile has proposed. The Court finds that both "**auto-switching capability**" and "**auto-switching switching capability**"

mean the “ability to automatically direct whether data communication with the wireless communication device occurs over the computerized network or over the over-the-air network.”

E. “automatically” (Claims 4, 11 & 19-22)

Plaintiffs’ Proposed Construction	T-Mobile’s Proposed Construction
No construction — plain meaning	“without user input”

Plaintiffs argue that T-Mobile’s proposed construction should be rejected as relying too heavily on extrinsic evidence, such as dictionary definitions. Dkt. No. 201 at 13-14. Plaintiffs also cite a declaration by their expert, Dr. Ahmed Tewfik, to support Plaintiffs’ position that the term requires no construction and that T-Mobile’s proposed construction “is inconsistent with how this term would be understood by a person having ordinary skill in the art.” *Id.*

T-Mobile responds that Plaintiffs “seek to read the word ‘automatically’ to mean the opposite of its plain meaning: *i.e.*, as requiring manual user input.” Dkt. No. 213 at 16. T-Mobile cites portions of the specification to support its proposed exclusion of user input. *Id.* (citing ‘923 Patent at 3:24-26, 3:44-48, 7:4-10 & 7:52-57). T-Mobile also cites constructions of similar terms by other courts. *Id.* at 17. Finally, T-Mobile notes that the *Phillips* court acknowledged that dictionaries are unbiased sources that can be useful for finding the commonly understood meanings of words. *Id.* at 17 n.1 (citing 415 F.3d at 1322).

Plaintiffs reply that “T-Mobile’s proposal is equivalent to suggesting that a digital watch does not ‘automatically’ keep time because of the user’s periodic input in setting or correcting the time displayed on the watch.” Dkt. No. 220 at 11.

Although Plaintiffs argue that this term should not be construed, the briefing demonstrates that the parties have a “fundamental dispute regarding the scope of a claim term,” and the Court has a duty to resolve the dispute. *O2 Micro*, 521 F.3d at 1362-63. The relevant claims recite (emphasis added):

4. A system as recited in claim 3 wherein said transceiver assembly *automatically* establishes communicative recognition between said computer and said wireless communication device within said pre-established vicinity range.
11. A method of hybrid communication utilizing a multi-frequency wireless communication device and an Internet access facility, said method comprising:
 - a) establishing communication between the Internet access facility and the wireless communication device when both are located within a pre-establish[ed] vicinity range,
 - b) communicating data to the wireless communication device over [t]he Internet through the Internet access facility,
 - c) alternatively establishing data communication with the wireless communication device by a compatible over-the-air network when the Internet access facility and the wireless communication device are disposed outside of the pre-established vicinity range, and
 - d) *automatically* switching messaging communication with said wireless communication device between the Internet and the over-the-air network dependent at least on said wireless communication device being inside or outside said pre-established vicinity range relative to the Internet access facility.
19. A system as recited in claim 18 wherein said auto-switching capability is responsive to said pre-established vicinity range to *automatically* establish at least two way messaging between said pager assembly and said computer facility when said pager assembly is within pre-established said vicinity range.
20. A system as recited in claim 18 wherein said auto-switching capability is responsive to said pre-established vicinity range to *automatically* establish at least one-way messaging with said over-the-air network when said pager assembly is outside said vicinity range.

21. A system as recited in claim 20 wherein said auto-switching switching capability is responsive to said pre-established vicinity range to *automatically* establish at least two-way messaging between said pager assembly and said computer when said pager assembly is within said vicinity range.

22. A system as recited in claim 21, wherein said auto switching capability is structured to *automatically* switch said pager assembly from data communication through said over-the-air network, when said pager assembly is outside said vicinity range to data communication with said computer facility, when said pager assembly is within said vicinity range.

The term “automatically” appears seven times in the specification (emphasis added):

Accordingly there is a substantial need in the art for a system and method which enables the integration or cross-over of various generally related technologies so as to substantially increase the versatility and productivity of the communications services offered. Specifically, as will be described within the context of the present invention and has yet been un-addressed in the art, such improved technology could include a hybrid communication system which will operate using standard flex paging protocol in combination with Bluetooth or similar technology for short range messaging. Such an improved hybrid communication system should have the ability to *automatically* switch to messaging communication with the wireless communication device using, for example, an Internet access facility, such as a personal computer (PC), when two transceivers incorporating the Bluetooth or equivalent technology are within the pre-established vicinity range. Alternatively, such an improved system as provided by the present invention could *automatically* switch to over-the-air network messaging with the wireless communication device, when outside the pre-established vicinity range, representing substantial savings for both the carriers and the users.

* * *

The communication system and method of the present invention also incorporates auto-switching capabilities, wherein data communication is *automatically* established with the access facility when at least one, or both of the aforementioned predetermined parameters (vicinity range and identification) have been established and wherein a first transceiver associated with the Internet access facility and the second transceiver associated with

the wireless communication device are configured to recognize and accept one another to establish such communication.

...

However, when the wireless communication device is disposed beyond the established vicinity range, the auto-switching capabilities will *automatically* provide for data communication with the wireless communication device by means of the over-the-air network, as set forth above.

* * *

[A]uthentication may rely on a challenge/response protocol utilizing a unique identifier (password, PIN, etc.). Two devices communicating with one another within the appropriate or pre-established vicinity range must contain or have recognition of the same unique identifier. This protocol allows each device to authenticate the other, *automatically*.

* * *

[O]nce the communication device 10 wanders outside of the pre-established vicinity range of the piconet 24 an auto-switching capability associated with the system and method of the present invention preferably, but not necessarily, *automatically* establishes communication between the wireless communication device 10 and the over-the-air network 14.

* * *

If the aforementioned pre-determine[d] parameters of identification and vicinity range are not met the auto-switching capabilities of the present invention are *automatically* operative to find an appropriate, compatible over-the-air network such[] as a cellular/paging, satellite or other appropriate network, as at 34.

‘923 Patent at 1:55-2:9 (Description of the Related Art), 3:22-31 (Summary of the Invention), 3:44-48 (same), 5:57-62 (Detailed Description of the Preferred Embodiment), 7:4-10 (same) & 7:52-57 (same).

“In some cases, the ordinary meaning of claim language as understood by a person of skill in the art may be readily apparent even to lay judges, and claim construction in such cases involves little more than the application of the widely accepted meaning of commonly understood words.” *Phillips*, 415 F.3d at 1314. This is such a case. The term “automatically” connotes absence of user input, and nothing in the claims or the above-quoted disclosure

suggests otherwise. Such a reading also comports with the extrinsic dictionary definitions submitted by T-Mobile, as well as constructions of similar terms in other cases. Dkt. No. 213, Ex. 8, *IBM Dictionary of Computing* 42 (1994) (defining “automatic” as “pertaining to a process or device that, under specified conditions, functions without intervention by a human operator”); Ex. 9, *Webster’s New Universal Unabridged Dictionary* 140 (1996) (defining “automatic” as “having the capability of starting, operating, moving, etc., independently”); Ex. 10, *The New Shorter Oxford English Dictionary* 152 (1993) (defining “automatic” as “self-acting; esp. (of a machine, device, etc.) working of itself, with little or no direct human actuation”); *Superguide Corp. v. DirecTV Enters., Inc.*, 358 F.3d 870, 893 (Fed. Cir. 2004) (affirming construction of “automatically electronically converting” as “a change in form of the selected television program listings by an electronic means without further involvement of the system’s user”).

Plaintiffs rely upon the opinion of their expert, Dr. Tewfik, whose full declaration as to this disputed term is as follows:

The term “automatically,” whether in its full form or in the abbreviated form included in phrasing such as “auto-switching” above, has a plain meaning easily understood by a PHOSITA [(person having ordinary skill in the art)] in light of the patent’s specification. T-Mobile’s proposal to construe “automatically” as meaning entirely “without user input” is too restrictive and inconsistent with the meaning of the term according to the understanding of a PHOSITA. A PHOSITA would understand that user input, such as to select parameters or policy, is not inconsistent with the plain meaning of “automatically.”

Dkt. No. 201, Ex. D, 7/31/2012 Tewfik Decl. (“Tewfik Decl.”) at ¶ 13. At the September 10, 2012 hearing, Plaintiffs also tendered and cited recent deposition testimony by Dr. Tewfik, taken on September 4 and 5, 2012, after the close of claim construction briefing. Dkt. No. 235-1. Dr. Tewfik opined that something is “automatic” if it can “take the inputs and produce an action,”

such as a household thermostat that has been programmed to maintain certain temperatures throughout the day and that turns a heating or cooling system on and off in response to inputs such as temperature measurements and time of day. 9/4/2012 Tewfik dep. at 73:11-74:24; *id.* at 76:12-14 (“The idea is that if given the inputs it takes certain actions.”); 9/5/2012 Tewfik dep. & 170:21-171:10 (similar).

T-Mobile’s proposed construction of “automatically” as “without user input” surely does not exclude any user involvement for all time. As Dr. Tewfik opines, it may be necessary to “select parameters or policy” at some point. Tewfik Decl. at ¶ 13. The claims, however, are not concerned with such setup procedures but instead are directed to normal operation. In the context of the claims, quoted above, “automatically” refers to operation without user input. At the September 10, 2012 hearing, the Court inquired whether either side would object to the Court noting that setup procedures are not excluded from the Court’s construction. Plaintiffs and T-Mobile stated they had no objection.

The Court therefore hereby construes “**automatically**” to mean “**without user input**,” but the Court hereby notes that this construction does not exclude the presence of setup procedures that might involve user input.

F. “dependent on the establishment of said [p]redetermined parameters” (Claims 1-5, 6-9, 16-23, 24-25 & 27)

Plaintiffs’ Proposed Construction	T-Mobile’s Proposed Construction
<p>No construction necessary — plain meaning. Alternatively, “the communication system has an auto-switching capability that allows for data communication with the wireless communication device either over the computerized network or through the computer facility when predetermined factors have been used to define the system, determine or limit its performance”</p>	<p>“depending on whether the two or more predetermined parameters have been met”</p>

Plaintiffs argue that the plural word “parameters” in this term can encompass one or more parameters, and Plaintiffs cite the following case law: *Versa Corp. v. Ag-Bag Int’l Ltd.*, 392 F.3d 1325, 1330 (Fed. Cir. 2004); *Dayco Prods., Inc. v. Total Containment, Inc.*, 258 F.3d 1317, 1328 (Fed. Cir. 2001); *Flash Seats, LLC v. Paciolon, Inc.*, No. 07-575-JJF, 2010 WL 184080, at *9 (D. Del. Jan. 19, 2010), *aff’d*, 469 Fed. App’x 916 (Fed. Cir. 2012); *Every Penny Counts, Inc. v. Bank of Am. Corp.*, No. 2:07-CV-42-FTM-29SPC, 2008 WL 4491113, at *6 (M.D. Fla. Sept. 29, 2008); and *MOAEC, Inc. v. Pandora Media, Inc.*, No. 07-CV-654-BBC, 2008 WL 4500704 (W.D. Wis. Sept. 30, 2008). Dkt. No. 201 at 15. Plaintiffs also cite disclosure in the specification of “at least one predetermined parameter.” *Id.* at 16 (citing ‘923 Patent at 3:3-5).

T-Mobile responds that the claims and the specification consistently refer to predetermined parameters in the plural sense and contemplate the use of multiple parameters, such as that, in T-Mobile’s words, the “pre-established vicinity range is *one of multiple* predetermined parameters.” Dkt. No. 213 at 18. T-Mobile also notes that because the specification refers in at least one instance to “at least one parameter” in the singular and in other instances to multiple “parameters,” the “patentee clearly knew how to distinguish between

singular and plural, and the system, as claimed, relies on multiple parameters.” *Id.* at 19. T-Mobile also cites several cases construing the plural form of a noun to mean two or more, such as: *Markem-Imaje Corp. v. Zipper Ltd.*, 657 F.3d 1293, 1297 (Fed. Cir. 2011); *Leggett & Platt, Inc. v. Hickory Springs Mfg. Co.*, 285 F.3d 1353, 1357 (Fed. Cir. 2002).

Although Plaintiffs argue that this term should not be construed, the briefing demonstrates that the parties have a “fundamental dispute regarding the scope of a claim term,” and the Court has a duty to resolve the dispute. *O2 Micro*, 521 F.3d at 1362-63. Claim 1 is representative and recites, in relevant part (emphasis added):

1. A hybrid communication system for wireless data communication said system comprising:
 - ...
 - d) said transceiver assembly including a first transceiver connected to said computer and at least a second transceiver connected to said wireless communication device and an auto-switching capability responsive to *pre-determined parameters*,
 - e) said auto-switching capability being determinative of data communication with said wireless communication device either over the computerized network through said computer facility or by the over-the-air network dependent on the establishment of said *[p]redetermined parameters*, and
 - f) at least one of *said predetermined parameters* comprising a pre-established vicinity range.

Plaintiffs and T-Mobile also cite claim 6, which recites, in relevant part (emphasis added):

6. A hybrid communication system for data communication, said system comprising:
 - ...
 - d) said transceiver assembly including an auto-switching switching capability responsive to *said predetermined parameters*,
 - e) *said predetermined parameters* comprising acceptance of said unique identifiers and a pre-established vicinity range existing between any one of said wireless communication devices and any one of said plurality of Internet access devices, and
 - f) said transceiver assembly and said auto-switching capability determinative of data communication with said wireless

communication device, either by said over-the-air network or by Internet access, dependent on the establishment of *said predetermined parameters*.

The use of the plural form of “parameters” weighs in favor of finding that two or more parameters are required. *Leggett & Platt*, 285 F.3d at 1357 (“At the outset, the claim recites ‘support wires’ in the plural, thus requiring more than one welded ‘support wire.’”). Nothing in the above-quoted claims is contrary to such a natural reading.

Plaintiffs cite an instance of where “predetermined parameter,” singular, is used in the specification: “Recognition and the establishment of messaging communication may be dependent, at least in part, on at least one *predetermined parameter*.” ‘923 Patent at 3:3-5 (emphasis added). T-Mobile points out two instances of where “predetermined parameters,” plural, is used in the specification:

The system includes auto-switching capabilities for determining the route of communication with the wireless communication device dependent, at least in part, on *predetermined parameters*, which may include the pre-established vicinity range and recognition of a unique identifier associated with at least the wireless communication device.

* * *

Upon recognition and when all the *pre-determined parameters* have been met, messaging communication between the computer 20 and the one or more wireless communication devices 10 is established.

Id. at 1:16-18 & 7:29-32 (emphasis added). The Court agrees with T-Mobile that the cited portions of the specification suggest that the patentee knew how to distinguish between singular “predetermined parameter” and plural “predetermined parameters,” and that the patentee intended to only claim the plural “predetermined parameters.”

Plaintiffs cite several cases in which courts considered the purpose of the invention in order to resolve whether a plural term referred to one or more as opposed to only two or more. However, these cases are all distinguishable from the present dispute. In *MOAEC, Inc. v. Pandora Media, Inc.*, the court rejected interpreting the term “music selections” to require two or more because such a reading “leads to a nonsensical result: when only one music selection had the category flag matching the category button the user activated, no selection would be displayed and the user would be prevented from having a fully customized playback of the stored music.” 2008 WL 4500704, at *6. Here, by contrast, requiring multiple predetermined parameters would *not* be “nonsensical when considered in context of the invention’s purpose.” *Id.* For example, the purposes disclosed in the ‘923 Patent include that the “auto switching capability establishes data communication with the computer or with the over-the-air network, dependent on whether the identification *and* vicinity parameters have been met.” ‘923 Patent at Abstract (emphasis added).

The court in *Every Penny Counts, Inc. v. Bank of America Corp.* considered the term “accounts” and found that “[t]he specifications, however, do not limit the invention to multiple accounts.” 2008 WL 4491113, at *6. The Court noted that “nothing suggests that a consumer cannot participate if he or she only wishes to save to one account.” *Id.* In other words, the court considered that the usefulness and operation of the invention was not influenced by whether there was one account or multiple accounts. Similarly, *Flash Seats, LLC v. Paciolon, Inc.* considered the term “asks” in the context of electronic ticket trading, and “the Court [found] nothing that strictly precludes use of the invention in connection with a single seller that provides a single ‘ask.’ Indeed, the specification even describes the invention with reference to the sale of

a single ticket, which is presumably associated with a single seller and a single ‘ask.’” 2010 WL 184080, at *9. In the above-captioned case, too, the specification discloses use of a single predetermined parameter, such as a “vicinity range.” ‘923 Patent at 3:3-19.

MOEAC, Every Penny, and Flash Seats all rely on *Versa Corporation v. Ag-Bag International Ltd.* for the general proposition that a plural noun can encompass one or more. In *Versa*, the court noted that “in context, the plural can describe a universe ranging from one to some higher number, rather than requiring more than one item.” 392 F.3d 1325, 1330 (Fed. Cir. 2004) (citing *Dayco Prods., Inc. v. Total Containment, Inc.*, 258 F.3d 1317, 1328 (Fed. Cir. 2001)). The *Versa* court interpreted the term “means . . . for creating air channels” to encompass one or more channels. At the September 10, 2012 hearing, T-Mobile urged that *Versa* is factually distinguishable because a “means . . . for creating air channels” would be able to create one air channel and need not necessarily multiple air channels.

The *Versa* court relied on *Dayco Products*, in which the court read a plural noun, “recesses,” to encompass the singular so that the larger term, a “plurality of . . . projections with recesses therebetween,” could be read to encompass two or more projections instead of requiring three or more. 258 F.3d at 1328. “The theory [wa]s that because ‘recesses’ is plural and because recesses are located between projections, three or more projections must exist if there are to be two or more recesses.” *Id.* The court concluded that “plurality of projections” should be read to require two or more projections and reasoned as follows:

In the phrase “projections with recesses therebetween,” the use of “recesses” can be understood to mean a single recess where there are only two projections and more than one recess where there are three or more projections. Indeed, in the present context, if the patentees had wanted to require an insert means with more than

one recess, it would have been natural to limit the claimed invention to an insert means with a “plurality of recesses.”

Id. Thus, *Dayco* read the plural noun “recesses” to encompass one or more so that the term “plurality” could carry its customary meaning of “two or more.” *Id.* at 1328 (noting that “‘plurality,’ when used in a claim, refers to two or more items, absent some indication to the contrary.”) (citing *York Prods., Inc. v. Cent. Tractor Farm & Family Ctr.*, 99 F.3d 1568, 1575 (Fed. Cir. 1996)).

On balance, the Court declines to extend the *Versa* approach to the instant case in light of the narrow circumstances of the *Dayco* case, upon which *Versa* and Plaintiffs’ other cited authorities relied, as well as in light of the general primacy of the claims. *Renishaw PLC v. Marposs Societa’ per Azioni*, 158 F.3d 1243, 1248 (Fed. Cir. 1998) (“[T]he claims define the scope of the right to exclude; the claim construction inquiry, therefore, begins and ends in all cases with the actual words of the claim.”). “The construction that stays true to the claim language and most naturally aligns with the patent’s description of the invention will be, in the end, the correct construction.” *Phillips*, 415 F.3d at 1316 (quoting *Renishaw*, 158 F.3d at 1250).

The Court therefore reads “parameters” as plural, in accordance with the language of the claims. *Leggett & Platt*, 285 F.3d at 1357. The Court finds that the term **“dependent on the establishment of said [p]redetermined parameters”** means **“depending on whether the two or more predetermined parameters have been met.”**

G. “pre-establish[ed] vicinity range” & “preestablished vicinity range” (All Claims)

Plaintiffs’ Proposed Construction	T-Mobile’s Proposed Construction
“a zone within which at least two transceivers in a transceiver assembly are able at a preset power level to recognize each other”	“a predetermined, fixed distance existing between the wireless communication device and the computer facility”

Plaintiffs submit that this term refers to a “coverage area,” rather than some fixed distance, because the specification discloses that ranges can vary based on “various factors including physical obstructions such as solid, non-metal objects between or around the first and second transceiver of the transceiver assembly.” Dkt. No. 201 at 17 (citing ‘923 Patent at 3:10-13 & 5:35-41). Plaintiffs also cite the declaration of their expert, Dr. Tewfik, as further support that a person of ordinary skill in the art would evaluate the disputed term with reference to signal strength and coverage area, not some fixed physical distance. *Id.* at 18.

T-Mobile responds that “[h]ad the patentee based the network switching decision on signal strength and quality, the patent would not have been granted, in view of the prior art.” Dkt. No. 213 at 5. T-Mobile submits that the presently disputed “range” limitation was incorporated into every claim of the patent-in-suit in order to overcome the patent examiner’s prior art rejections. *Id.* T-Mobile urges that Plaintiffs should not now be allowed to rewrite the claims by reading out the words “pre-established” and “vicinity.” *Id.* at 5-6. T-Mobile also notes that in a continuation-in-part application based on the application that led to the ‘923 Patent, the “patentees specifically claimed signal strength and signal integrity as further predetermined parameters in dependent claims, demonstrating their knowledge that they were distinct from ‘pre-established vicinity range.’” *Id.* at 9-10.

T-Mobile also argues that the specification consistently describes the “pre-established vicinity range” as a specific distance. *Id.* at 6 (citing ‘923 Patent at 3:8-11, 3:62-64, 5:36-38 & 6:52-53). T-Mobile further argues that “[t]he specification and claims also repeatedly refer to the wireless communication device being ‘inside’ or ‘outside’ the pre-established vicinity range.” *Id.* at 7. Finally, T-Mobile notes that a system based on signal strength would not use “range” as

a parameter. *Id.* at 7-8. “[R]ather it would reference whether the device was receiving or not receiving a signal of some threshold strength—and that threshold may be met at a variety of distances from the access point depending on environmental factors.” *Id.* at 8. T-Mobile concludes that Plaintiffs’ proposal should be rejected because “[a] range that depends on the power level of the transmitter and environmental factors cannot be ‘predetermined’ or consist of a specific ‘vicinity range,’ but must necessarily fluctuate over time.” *Id.* at 10.

Plaintiffs reply that T-Mobile’s reliance on “Wi-Fi”⁴ embodiments should be rejected because the claims are not limited to Wi-Fi. Dkt. No. 220 at 8. Plaintiffs also urge that T-Mobile’s effort to limit the disputed terms to a fixed distance is merely an effort to avoid infringement and does not comport with how a person of ordinary skill in the art would understand a “range.” *Id.* at 9 (citing Tewfik Decl. at ¶ 15; citing ‘923 Patent at 3:5-13 & 5:35-41).

At the September 10, 2012 hearing, Plaintiffs presented an alternative proposed construction of “pre-established vicinity range” as “zone or coverage area within which the at least two transceivers are able to recognize each other and communicate.” Plaintiffs urged that the transceivers must be within some range in order to communicate and then, in addition, the transceivers must be “compatible or configured to recognize one another,” as disclosed in the specification and as explained by Dr. Tewfik. ‘923 Patent at 6:56-63; Tewfik dep. at 108:12-

⁴ The briefing discusses “Wi-Fi,” which refers to the widely-used IEEE 802.11 standards for wireless local area networking, but the specification of the ‘923 Patent refers only to Bluetooth, which is a different type of wireless communication standard. As confirmed by T-Mobile in response to the Court’s inquiry at the September 10, 2012 hearing, Wi-Fi and Bluetooth are interchangeable for purposes of the ‘923 Patent.

108:25 (“So it is not just a matter of being able to read or, you know, hear a signal, you have to be able to decode the signal and be allowed to communicate with the signal.”).

On one hand, Plaintiffs’ expert, Dr. Tewfik, opines that “range” refers to signal strength or a coverage area rather than actual distance. The entire applicable portion of Dr. Tewfik’s declaration is reproduced herein:

I understand that Plaintiffs have proposed construing this claim language as meaning “a zone within which at least two transceivers in a transceiver assembly are able at a preset power level to recognize[] each other,” while T-Mobile’s proposed construction would require a “predetermined, fixed distance existing between the wireless communication device and the computer facility.” Of the two, it is Plaintiffs’ proposed construction that is more consistent with the meaning this language would have to a PHOSITA [(person having ordinary skill in the art)] when read in light of the patent specification. A PHOSITA would not understand this claim language as requiring a fixed distance between the wireless communication device and the computer facility, but as requiring a zone or coverage area within which the at least two transceivers are able to recognize each other and communicate. ’923 Patent, 3:5-21; 5:35-41; 6:46-67. A PHOSITA understands that signal to noise ratio at each transceiver needs to be higher than a minimum ratio. The vicinity range or coverage area for communication between devices at issue may be influenced by a number of factors, principally the power level of at least one of the devices and the relative signal strength between them. ’923 Patent, 3:1-5; 5:35-41. Communication may be affected at a given power level by interference and background noise. Because of these and other factors, such as the presence of physical obstructions between the devices, the vicinity range for communication between the two devices would not be understood by a PHOSITA as a fixed distance between the devices as suggested by T-Mobile.

Tewfik Decl. at ¶ 15. Dr. Tewfik similarly opined in his deposition that the “pre-established vicinity range” refers to the ability to communicate rather than to a specific distance:

Q. . . . What does it mean here in the patent when it says pre-established? Pre-established is a word in the claim term in all of

the claims. What does it, what does it mean to be pre-established in this patent?

[Objection]

A. To me pre-established means that you are in the vicinity in such a way that you can have communications with that gateway to the wired network.

Q. So what is --

A. That is how it is going to be understood by a technical person.

Q. So how is that pre-established? What is being established in advance?

A. It is pre-established --

[Objection]

A. Okay. It would be pre-established in the sense that if you were to say I'm going to use Bluetooth to communicate with the wired network, then generally speaking we know that Bluetooth, because of the power levels that we use and the technology and the given Bluetooth transmitters that we have, will generally operate up to a few meters. It could be 2 meters, 3 meters, 5 meters. We would not expect it to operate at a distance of, let's say, 50 meters. So if you are saying in a particular implementation I am using Bluetooth technology and only Bluetooth technology to communicate with a gateway, then the pre-established range to a technical person would mean that we are using this within a room. So for example, going back to the ultra wideband communication system that we worked on, because it was a piconet as a replacement of Bluetooth, whenever we were describing the system we were saying this is technology that you would deploy for communication within a room.

It doesn't mean that you could not communicate with the next room if you are close enough, it depends on the building material, etcetera. Generally speaking, that is how we described it.

On the other hand, if we were using Wi-Fi to communicate with the wired network to the gateway, then for that we would expect that you have longer distances in general, exact precise distance will depend on building material, environment, etcetera. But we would expect that to be 10s of meters as opposed to a meter or a couple of meters or 3 meters.

So that is how I would read pre-established. If you pick a particular technology that will give you an upper bound, generally speaking on how far you could be from that access point as opposed to a different technology. It can happen that in a given environment you could be further than that, because you are

having constructive interference, but generally speaking that is how I would read it.

* * *

Q. . . . So in Column 5 [of the '923 Patent] you identified lines . . . 31 through 40 as supporting your interpretation that the patentee when describing the vicinity range intended the vicinity range to be dependent on things other than distance; is that correct?

A. Well, I mentioned that in that part the patentee talks about the ability to transmit through solid non-metal objects. In other words, he is aware of the propagation of facts [*sic*, effects] and what happens if you go through different types of material.

Q. Okay. And if the system with the pre-established vicinity range were a fixed distance, it may not work as well because of the factors you described but --

A. No, let me just say the following.

Q. Okay.

A. If you are able to construct a system and guarantee that it will always work for a fixed distance, I think you will get a Nobel Prize or something. I don't think it can be done.

* * *

A. . . . Anyone who has had a basic class in physics and then has had any class in communications, knows that the first thing is there is no such thing as being able to guarantee a communication between Point A and Point B unless you are in free space or you are not on earth, you are somewhere else and you can do that, okay.

9/5/2012 Tewfik dep. at 89:10-92:10, 101:5-24 & 103:24-104:5.

On the other hand, the specification repeatedly refers to a "vicinity range" or "pre-established vicinity range" as an actual distance (emphasis added):

One such predetermined parameter may be a vicinity range, wherein the first and second transceivers, in order to recognize one another must be within a pre-established vicinity. *Currently such a pre-established vicinity range may be generally about 100 meters.* However, it is emphasized that the vicinity range is not limited to 100 meters and can vary greatly based at least in part on technological advancements and the specific applications of the present invention.

* * *

Other features of the system and method of the present invention comprise the transceiver assembly, whether incorporating

Bluetooth technology or its equivalent, including a scanning capability wherein scanning for recognition, preferably of the unique identifier associated with each of the transceivers is conducted and when the aforementioned predetermined parameters, including *for example an acceptable vicinity range of 100 meters or other pre-established distance*, is met, mutual recognition of the first and second transceivers is accomplished.

* * *

[T]he transceiver assembly is preferably capable of transmitting through solid, non-metal objects, enjoying an *operative range of generally from 10 cm to 10 m, which is typically extended to a vicinity range of about 100 meters*, by increasing the transmitting power, and is omni directional, supporting both isochronous and asynchronous services.

* * *

In order to accomplish this identification parameter, the *maximum distance* between the wireless communication device 10 and the computer 20 *must be within the pre-established vicinity range*, which of course may vary, as described above.

* * *

At least one other predetermined parameter which [m]ay be established, based at least in part on the short range frequency standard on which the transceiver assembly operates, is a pre-established vicinity range. More specifically, the *pre-established vicinity range may be currently defined as about 100 meters*. However, it is emphasized that the actual vicinity range incorporated in the present invention may vary greatly and is not limited to the indicated 100 meters.

‘923 Patent at 3:5-13 (Summary of the Invention), 3:56-67 (same), 5:35-41 (Detailed Description of the Preferred Embodiment), 6:63-67 (same) & 6:48-56 (same).

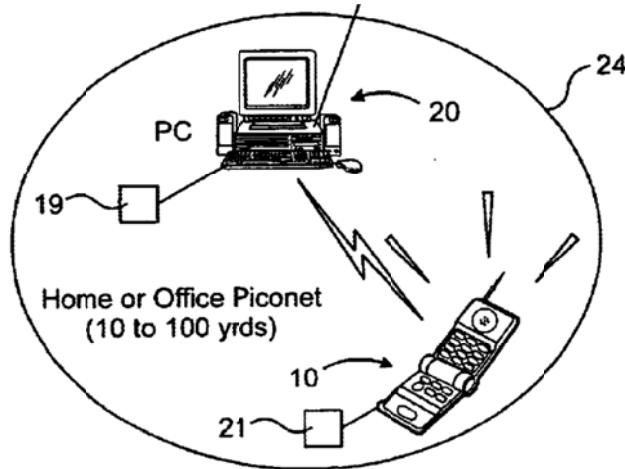
The example distance disclosed in the specification should not be imported into the claims as a limitation. Nonetheless, the “range” terms are used in the above-quoted passages to refer to actual distance, especially in the disclosure of “for example an acceptable vicinity range of 100 meters or other pre-established *distance*.” *Id.* at 3:62-64 (emphasis added). Dependent claim 26, likewise, recites “wherein said pre-established vicinity range comprises at least 100 meters,” which is an actual distance. *Phillips*, 415 F.3d at 1314 (“Because claim terms are

normally used consistently throughout the patent, the usage of a term in one claim can often illuminate the meaning of the same term in other claims.”); *Wright Med. Tech., Inc. v. Osteonics Corp.*, 122 F.3d 1440, 1445 (Fed. Cir. 1997) (“[W]e must not interpret an independent claim in a way that is inconsistent with a claim which depends from it.”).

Such a reading is also consistent with the constituent term “pre-established,” which better comports with an actual, pre-determined distance than with an amorphous coverage zone that could vary during operation based on, for example, movement of nearby objects, orientation of the transceivers or their antennas, available power, and environmental factors. *Merck & Co. v. Teva Pharm. USA, Inc.*, 395 F.3d 1364, 1372 (Fed. Cir. 2005) (“A claim construction that gives meaning to all the terms of the claim is preferred over one that does not do so.”).

As support for their construction referring to a power level, Plaintiffs emphasized at the September 10, 2012 hearing the disclosure of an “operative range” that is “typically extended to a vicinity range of about 100 meters[] by *increasing the transmitting power.*” *Id.* at 5:37-39. The claims, however, recite a “*pre-established* vicinity range,” and the disclosure that the range can be extended by increasing the transmitting power is not inconsistent with the other above-quoted disclosures, which consistently characterize the “pre-established vicinity range” in terms of a specified distance rather than in terms of the ability for transceivers to recognize one another.

Finally, although claims should generally not be limited to embodiments disclosed in the figures, Figure 1 nonetheless serves as additional evidence that the “pre-established vicinity range” is a distance (“10 to 100 yards”) rather than an amorphous coverage area. The relevant portion of Figure 1 is reproduced herein:

**FIG. 1**

As to the prosecution history, T-Mobile presents two separate arguments. First, T-Mobile cites the patentee's reliance on the "pre-established vicinity range" to obtain allowance of the claims of the '923 Patent. Second, T-Mobile cites the patentee's statements during prosecution of a continuation-in-part of the application that led to the '923 Patent.

As to the first prosecution history argument, "pre-established vicinity range" appeared as a limitation in several dependent claims as well as in original application claims 30-39. Dkt. No. 214, Ex. 1 at CALYPSO00037-46. In an office action, the examiner found that original application claims 30-39 were allowable, and those claims ultimately issued as claims 6-15 of the '923 Patent. 9/8/2003 Office Action, *id.* at CALYPSO00073. The remaining independent claims were rejected based on United States Patent No. 6,608,832 to Forslow (Dkt. No. 214, Ex. 2) or Forslow in combination with United States Patent No. 6,601,040 to Kolls (Dkt. No. 214, Ex. 3). *Id.* at CALYPSO00071-73. In particular, the non-pager claims were rejected as anticipated by Forslow, which disclosed mobile communications employing either a circuit-switched network or a packet-switched network depending on one or more parameters related to

the network properties needed for particular traffic. *Id.* at CALYPSO00071-72; Forslow at Abstract, 5:33-6:3, 9:48-61, 13:2-6 & Fig. 8.

The examiner stated that the rejected claims would be allowable over the cited prior art if rewritten to include limitations from certain dependent claims, including claims that recited “pre-established vicinity range.” Dkt. No. 214, Ex. 1 at CALYPSO00073. The examiner confirmed this in a personal interview. 9/9/2003 Interview Summary, *id.* at CALYPSO00121. The patentee amended the rejected claims as suggested by the examiner so as to recite “pre-established vicinity range.” 9/12/2003 Amendment, *id.* at CALYPSO00080-81 & CALYPSO00086-89. The examiner allowed the amended claims and cited the “pre-established vicinity range” in the Reasons for Allowance as to all of the independent claims of the ‘923 Patent. *Id.* at CALYPSO00123-124.

On one hand, the patentee’s amendments to add “pre-established vicinity range” in order to overcome rejections should be given effect in the construction of the disputed terms. *Typhoon Touch Techs., Inc. v. Dell, Inc.*, 659 F.3d 1376, 1381 (Fed. Cir. 2011) (“The patentee is bound by representations made and actions that were taken in order to obtain the patent.”). On the other hand, this Court finds no “clear and unmistakable” disavowal or definition of “pre-established vicinity range” based on any of the patentee’s statements or the disclosures in Forslow and Kolls. *Omega Eng’g*, 334 F.3d at 1326. This is not a case where the patentee introduced an entirely new limitation to the claims or narrowly defined an existing limitation in order to overcome prior art. Instead, the examiner found that the original claims reciting “pre-established vicinity range” were allowable, and the patentee simply added that limitation to the remaining claims. Thus,

although “pre-established vicinity range” is certainly a limitation, the prosecution history provides no meaningful guidance on its construction.

As to the second prosecution history argument, T-Mobile cites the patentee’s statements during prosecution of application 11/040,842 (“the ‘842 application”), which ultimately issued as United States Patent No. 7,546,141 (“the ‘141 Patent”). Original application claim 1 recited “said predetermined parameter comprising a pre-established vicinity range,” and claim 8, depending from claim 1, recited “wherein said predetermined parameter further comprises signal strength.” *See* Dkt. No. 214, Ex. 4 at TMUS-PRIOR-ART00004442-44; *see also* ‘141 Patent. Although this is a later application, the patentee’s statements in later prosecution of a related patent can be relevant to the scope of an earlier parent application. *Microsoft Corp. v. Multi-Tech Sys., Inc.*, 357 F.3d 1340, 1350 (Fed. Cir. 2004); *cf. Cummins-Allison Corp. v. Glory, Ltd.*, 457 F. Supp. 2d 843, 847-48 (N.D. Ill. 2006) (“On the basis of [Multi-Tech], the court determined that it could rely upon the language of the specification in a later patent as intrinsic evidence that could shed light on the appropriate construction of the claim language in an earlier patent.”).

The examiner rejected the ‘842 application based in part on United States Patent No. 6,198,941 to Aho (Dkt. No. 214 at Ex. 5), which discloses that “[v]arious signals indicative of the environment in which the device is operating are monitored[] to anticipate or predict a change or transition from one communication arrangement to another.” Aho at Abstract. Such inputs can include “falling signal strength . . . in a first communications arrangement,” “increasing signal strength . . . in a second communications arrangement,” “jitter, noise, distortion and the like,” and “geographic positioning information” such as “GPS.” *Id.* at 2:64-

3:29. For example, “GPS information may be used . . . in conjunction with other information relating to the topology of the boundaries of the different available communications arrangements, to better anticipate the occurrence of a transition in the communications arrangement.” *Id.* at 6:22-26. The examiner cited Aho as disclosing auto-switching between a computer network and a satellite network based on pre-determined parameters, such as a pre-established vicinity range. 4/25/2008 Office Action, Dkt. No. 214, Ex. 4 at TMUS-PRIOR-ART00004759-61. The patentee responded that the disclosure in Aho of “GPS capabilities” did not render the patentee’s claims obvious because

information which is indicative of a specific geographical location of the device . . . does not render obvious Applicant’s claimed auto switching capabilities being dependent on a predetermined parameter which is now more specifically defined as presence within a pre-established vicinity range. Again Applicant emphasizes that the GPS receiver 112 of the Aho et al. reference is optionally included for the sole purpose of locating the device 101 and is irrelevant to the auto switching capabilities in terms of its operation concurrently to the wireless communication device being within a pre-established vicinity range.

9/25/2008 Amendment, *id.* at TMUS-PRIOR-ART00004791.

T-Mobile interprets this prosecution history as a disclaimer of reading “pre-established vicinity” to refer to anything other than actual distance, such as signal strength or the ability to establish a connection. Indeed, in another portion of the same filing, the patentee listed “signal strength and signal integrity” separately from “predetermined vicinity range”:

[T]he wireless communication device defined in Applicant’s claimed system is structured to seamlessly “auto switch” its operation between either of at least two independent frequencies for communication with the computer network or the over the air network depending on *predetermined parameters which include* the acceptance of a unique identifier, *the positioning of the wireless communication device within a predetermined vicinity*

range relative to the network access, signal strength and signal integrity.

Id. at TMUS-PRIOR-ART00004789 (emphasis added).

On balance, none of the statements cited by T-Mobile rise to the level of a “clear and unmistakable” disavowal or definition of “pre-established vicinity range” based on any of the patentee’s statements or the disclosure in Aho. *Omega Eng’g*, 334 F.3d at 1326. Nonetheless, this prosecution history is additional supporting evidence that the term “pre-established vicinity range” refers to a specified distance rather than, for example, an amorphous coverage area defined by signal strength, signal-to-noise ratio, or some similar parameter. *Phillips*, 415 F.3d at 1317 (noting that “the prosecution history can often inform the meaning of the claim language”).

The Court rejects the proposition that construing the term to require a specified distance is improper simply because the ‘923 Patent allegedly fails to disclose sufficient technical detail about how to determine when two transceivers are within a predetermined maximum distance from one another. In this instance, the Court finds that this construction is compelled by the weight of the evidence, and even if it is true that the claim is thus rendered invalid, the principle that the Court should construe to preserve a patent’s validity is not enough to overrule the evidence:

While we have acknowledged the maxim that claims should be construed to preserve their validity, we have not applied that principle broadly, and we have certainly not endorsed a regime in which validity analysis is a regular component of claim construction. Instead, we have limited the maxim to cases in which the court concludes, after applying all the available tools of claim construction, that the claim is still ambiguous.

Phillips, 415 F.3d at 1327 (citations and internal quotation marks omitted); *accord Rhine v. Casio, Inc.*, 183 F.3d 1342, 1346 (Fed. Cir. 1999) (rejecting argument that court’s claim construction would render a claim obvious and noting that a party “cannot avoid a full-blown

validity analysis by raising the specter of invalidity during the claim construction phase”). Thus, the Court has applied the “available tools of claim construction” and adopted the meaning of “pre-established vicinity range” that is evident from the claims, the specification, and the prosecution history. *Phillips*, 415 F.3d at 1327.

Moreover, Plaintiffs’ proposed constructions cannot be reconciled with the intrinsic evidence. The lone reference to “solid, non-metal objects” cited by Plaintiffs and quoted above refers merely to the capability of penetrating such objects rather than to the potential influence of such objects on the operative range of the transceiver assembly. *Id.* at 5:35-41. Plaintiffs have not identified any explanation, characterization, or implication that a “pre-established vicinity range” is defined as a coverage area or zone within which the transceiver assembly can communicate, and the Court finds none. Rather, T-Mobile aptly summarizes the problem with Plaintiffs’ proposed interpretation as follows:

A system based on signal strength would not use as a parameter whether a device is inside or outside a “pre-established vicinity range”—rather it would reference whether the device was receiving or not receiving a signal of some threshold strength—and that threshold may be met at a variety of distances from the access point depending on environmental factors. The ’923 patent never makes any such reference.

Dkt. No. 213 at 7-8.

Plaintiffs’ proposed constructions, which would define “pre-established vicinity range” in terms of whether devices are able to recognize each other during operation, fail to give meaning to the constituent term “pre-established” and instead describe an inherent property of every wireless system, to wit, that its range is limited. Dr. Tewfik’s reliance on the expected range limitations of particular technologies, such as Bluetooth and Wi-Fi, suffers from the same defect.

See 9/5/2012 Tewfik dep. at 89:10-92:10. Surely there is some distance within which an operational, properly configured transceiver assembly can establish communication and outside of which it cannot. Construing the disputed term in such a manner, however, would fail to give meaning to the word “pre-established” and its recitation in the claims as a “pre-determined parameter” that is used to determine which network will be used for communication. Plaintiffs’ proposed constructions, which fail to “give[] meaning to all the terms of the claim,” are thus disfavored. *Merck*, 395 F.3d at 1372. Finally, Plaintiffs’ argument that the *generally expected* range of a particular technology gives meaning to the constituent term “pre-established” is inconsistent with Plaintiffs’ proposal that the “pre-established vicinity range” is defined by the ability of two transceivers to communicate with each other *in a particular embodiment*.

At the September 10, 2012 hearing, the Court proposed construing “pre-established vicinity range” to mean “a predetermined maximum distance existing between the wireless communication device and the computer facility.” T-Mobile was agreeable to the Court’s preliminary construction. Plaintiffs argued against the construction, noting that the disclosure in the specification of a “maximum distance” suggests that it is distinct from the “pre-established vicinity range”:

In order to accomplish this identification parameter, the *maximum distance* between the wireless communication device 10 and the computer 20 *must be within the pre-established vicinity range*, which of course may vary, as described above.

‘923 Patent at 6:63-67. The Court disagrees with Plaintiffs’ interpretation of the evidence. This passage from the specification uses “maximum distance” to refer to the actual distance between the wireless communication device and the computer at a given time during operation, which could vary if the wireless communication device moves closer or farther away. The disputed

claim term and the Court's preliminary construction both refer to a "predetermined" maximum distance. This is a *predetermined* parameter that does not change, based on movement or otherwise, during normal operation. Instead, this is one of potentially several predetermined parameters that can be used in determining which communication network to use during operation. Thus, the passage emphasized by Plaintiffs is not inconsistent with the Court's proposed construction.

The Court finds that the terms "**“pre-establish[ed] vicinity range”**" and "**“preestablished vicinity range”**" means "**“a predetermined, maximum distance existing between the wireless communication device and the computer facility.”**"

H. “communicative recognition between said computer and said wireless communication device within said pre-established vicinity range” (Claims 4-5)

Plaintiffs' Proposed Construction	T-Mobile's Proposed Construction
No construction necessary. Alternatively, "establishment of a communication link between the computer and the wireless communication device"	"recognition by the first transceiver of the second transceiver associated with the wireless communication device when the wireless communication device is within the pre-established vicinity range of the computer" ⁵

Plaintiffs argue that to whatever extent construction is required, the only phrase that is not already subject to construction in the other claim terms is "communicative recognition," which is disclosed in the specification as establishment of communication. Dkt. No. 201 at 19 (citing '923 Patent at 3:3-21, 3:61-65 & 6:34-47). Plaintiffs also argue that T-Mobile's proposal imports limitations from the specification and violates the doctrine of claim differentiation by

⁵ T-Mobile originally proposed: "Mutual authentication between the first and the second transceivers using the unique identifier when the wireless communication device is within the pre-established vicinity range of the computer." Dkt. No. 167, Attach. 2 at 16.

importing limitations from claim 5 into the construction of a term in claim 4, from which claim 5 depends. *Id.* at 20. T-Mobile responds that Plaintiffs' proposal reads out "within said pre-established vicinity range" and also "recognition." Dkt. No. 213 at 12. T-Mobile submits that the requirement of recognition is supported by the specification. *Id.* at 13 (citing '923 Patent at 2:48-57, 6:34-37 & 7:24-29). Plaintiffs reply that T-Mobile's proposal errs by requiring only that the transceivers to recognize the other. Dkt. No. 220 at 10. Plaintiffs also reiterate that the only part of the disputed term that requires construction here is "communicative recognition" because the remainder of the disputed term is either the subject of an agreed construction or is addressed as a separate disputed term. *Id.*

Although Plaintiffs argue that this term should not be construed, the briefing demonstrates that the parties have a "fundamental dispute regarding the scope of a claim term," and the Court has a duty to resolve the dispute. *O2 Micro*, 521 F.3d at 1362-63. The relevant claims recite (emphasis added):

4. A system as recited in claim 3 wherein said transceiver assembly automatically establishes *communicative recognition* between said computer and said wireless communication device within said pre-established vicinity range.

5. A system as recited in claim 4 wherein said predetermined parameters further comprise *recognition* compliance of said wireless communication device based at least partially on said unique identifier.

Claim 5 appears to recite recognition based on a unique identifier. Because claim 5 depends from claim 4, the doctrine of claim differentiation creates a presumption that the communicative recognition recited in claim 4 need not be based on a unique identifier. *Phillips*, 415 F.3d at 1315 ("[T]he presence of a dependent claim that adds a particular limitation gives rise to a

presumption that the limitation in question is not present in the independent claim.”); *accord Wenger Mfg., Inc. v. Coating Mach. Sys., Inc.*, 239 F.3d 1225, 1233 (Fed. Cir. 2001); *Curtiss-Wright Flow Control Corp. v. Velan, Inc.*, 438 F.3d 1374, 1380 (Fed. Cir. 2006) (“In the most specific sense, ‘claim differentiation’ refers to the presumption that an independent claim should not be construed as requiring a limitation added by a dependent claim.”).

As to whether recognition must be mutual—that is, by both the computer and the wireless communication device—or can instead be by one or the other, the Summary of the Invention discloses:

The communication system and method of the present invention also incorporates auto-switching capabilities, wherein data communication is automatically established with the access facility when at least one, or both of the aforementioned predetermined parameters (vicinity range and identification) have been established and wherein *a first transceiver* associated with the Internet access facility *and the second transceiver* associated with the wireless communication device are configured to *recognize and accept one another* to establish such communication.

‘923 Patent at 3:22-31 (emphasis added); *see also id.* at 3:5-8, 3:61-65 (“mutual recognition of the first and second transceivers is accomplished”), 6:34-47 & 7:47-51. This disclosure, compounded with the language of the disputed term itself, which requires “communicative recognition *between* said computer and said wireless communication device,” supports only requiring that the two devices recognize each other. Incidentally, such a reading also comports with T-Mobile’s original proposed construction, which would have required “[m]utual authentication between the first and the second transceivers.” Dkt. No. 167, Attach. 2 at 16.

Finally, at the September 10, 2012 hearing Plaintiffs argued that including the first transceiver and the second transceiver in the construction would add unnecessary complexity to

the construction, but Plaintiffs did not argue that referring to the transceivers would be inaccurate. Claim 4 expressly recites that “said transceiver assembly automatically establishes” the “communicative recognition.” Claim 4 depends from claim 3, which in turn depends from claim 1. Because the “transceiver assembly” is recited in claim 1 as “including a first transceiver connected to said computer and at least a second transceiver connected to said wireless communication device,” the Court’s construction should refer to the transceivers.

The Court therefore construes **“communicative recognition between said computer and said wireless communication device within said pre-established vicinity range”** to mean **“mutual recognition between the first transceiver and the second transceiver when the wireless communication device and the computer are within the pre-established vicinity range from one another.”**

I. “messaging communication” (Claims 6-9 & 11-15)

Plaintiffs’ Proposed Construction	T-Mobile’s Proposed Construction
“data communication”	“alphanumeric messaging communication”

Plaintiffs argue that the claims use the term “messaging communication” interchangeably with the term “data communication,” which the parties have agreed means “communication of voice, video, alphanumeric or other data.” Dkt. No. 201 at 21. Plaintiffs cite claim 6, for example, which uses both terms. *Id.* As another example, Plaintiffs submit, claim 11 recites “messaging communication” but then recites a step of “communicating data.” *Id.* at 22. Plaintiffs also argue that the specification uses the terms synonymously. *Id.* (citing ‘923 Patent at 1:65-2:4, 2:21-33, 3:3-5, 4:61-5:1, 6:37-42, 6:56-67 & 7:29-32). Plaintiffs conclude that although different terms are presumed to carry different meanings, “different terms or phrases in

separate [claims] may be construed to cover the same subject matter where the written description and prosecution history indicate that such a reading of the terms or phrases is proper.” *Id.* at 22-23.

T-Mobile responds that Plaintiffs are “attempt[ing] to stretch the term ‘messaging communication’ to include essentially all types of wireless communication, including voice and video.” Dkt. No. 213 at 26. T-Mobile submits that “messaging communication” is a “subcategory” of “data communication” that is consistently disclosed and described as alphanumeric messaging. *Id.* at 26-27. T-Mobile also notes that some of the claims recite one-way messaging communication, which T-Mobile argues cannot cover voice or video because voice and video require two-way communication. *Id.* at 27.

Plaintiffs reply that “messaging communication” and “data communication” need not have different meanings, as T-Mobile argues, because “patent claims are often multiplied in practice to describe the claimed invention in a variety of different ways, using different language to describe the same subject matter.” Dkt. No. 220 at 17. As to T-Mobile’s argument that voice requires “two-way” communication, “it could suffice to say that two people speaking at the same time is no communication at all,” and “T-Mobile’s attempt to distinguish ‘messaging’ and ‘data’ communication as being either ‘one-way’ or ‘two-way’ is replete with ambiguity (failing, for example, to explain whether a voice transmission that is received without reply is a one-way or two-way communication).” *Id.*

As an initial matter, T-Mobile has shown no persuasive support for its argument that voice or video communication must be “two-way.” The one-way vs. two-way dichotomy advanced by T-Mobile is rejected.

The claims at issue, namely claims 6-9 and 11-15, use both “data communication” and “messaging communication,” which gives rise to a presumption that those different terms carry different meanings. *Bancorp Services, L.L.C. v. Hartford Life Ins. Co.*, 359 F.3d 1367, 1373 (Fed. Cir. 2004) (“[U]se of [two] terms in close proximity in the same claim gives rise to an inference that a different meaning should be assigned to each”); *see Symantec Corp. v. Computer Assocs. Int’l, Inc.*, 522 F.3d 1279, 1289 (Fed. Cir. 2008) (“[W]hen construing terms in the body of a claim, the general assumption is that different terms have different meanings”); *see also Becton, Dickinson & Co. v. Tyco Healthcare Group, LP*, 616 F.3d 1249, 1254 (Fed. Cir. 2010) (“Where a claim lists elements separately, the clear implication of the claim language is that those elements are distinct components of the patented invention.”) (citations and internal quotation marks omitted).

The presumption of different meanings, however, is rebuttable. *See CAE Screenplates, Inc. v. Heinrich Fiedler GmbH & Co. KG*, 224 F.3d 1308, 1317 (Fed. Cir. 2000) (“*In the absence of any evidence to the contrary*, we must presume that the use of these different terms in the claims connotes different meanings.”) (emphasis added); *see also Fujitsu Ltd. v. Tellabs Operations, Inc.*, Nos. 08 C 3379, 09 C 4530, 2012 WL 987272, at *7 (N.D. Ill. Mar. 21, 2012).

Here, the presumption is rebutted. For example, claims 11-15 recite (emphasis added):

- 11. A method of hybrid communication utilizing a multi-frequency wireless communication device and an Internet access facility, said method comprising:
 - a) establishing *communication* between the Internet access facility and the wireless communication device when both are located within a pre-establish[ed] vicinity range,
 - b) *communicating data* to the wireless communication device over [t]he Internet through the Internet access facility,
 - c) alternatively establishing *data communication* with the wireless communication device by a compatible over-the-air network when

the Internet access facility and the wireless communication device are disposed outside of the pre-established vicinity range, and
d) automatically switching *messaging communication* with said wireless communication device between the Internet and the over-the-air network dependent at least on said wireless communication device being inside or outside said pre-established vicinity range relative to the Internet access facility.

12. A method as recited in claim 11 comprising establishing at least two-way *messaging* with the wireless communication device over the Internet through the Internet access facility.

13. A method as recited in claim 12 comprising establishing at least one-way *messaging* with said wireless communication device by the over-the-air network.

14. A method as recited in claim 11 comprising conducting a scan by at least one of the wireless communication device or Internet access facility for the other to establish *communication* therebetween when both are within the pre-established vicinity range.

15. A method as recited in claim 11 comprising configuring either the wireless communication device or the Internet access facility to selectively regulate time and/or content of *messaging data* to the wireless communication device.

Step (a) of claim 11 recites “establishing *communication*” with an Internet access facility, and step (c) recites “establishing *data communication*” using an over-the-air network. Step (d) then recites “switching *messaging communication*” “between the Internet and the over-the-air network dependent at least on said wireless communication device being inside or outside said pre-established vicinity range relative to the Internet access facility.” Thus, “messaging communication” in step (d) refers to the same “communication” and “data communication” recited in steps (a) and (c). Claim 6 presents a similar scenario as to steps (a) and (f) therein.

As further support that the presumption has been rebutted, the specification uses “messaging communication” broadly to encompass communication by a wide range of devices on a wide range of communication networks:

The present invention relates to a system and method of hybrid communication wherein communication is established with any one of a plurality of wireless communication devices, generally indicated as 10 in FIG. 1. Such *wireless communication devices may of course include a pager assembly, cellular telephone, PDA, etc.* More importantly, *messaging communication* can be established with any of the plurality of wireless communication devices 10 either by means of a *global or local computerized network, such as for example, the Internet* 12 through an Internet service provider 15 including one or more servers 16, *or alternatively by a compatible over-the-air network, generally indicated as 14, also including appropriate servers 18.* The over-the-air network can be defined by *any compatible paging and/or cellular infrastructure, satellite communication 17 or other appropriate communication facilities,* dependent on the type of wireless communication device 10 being utilized and a variety of other related factors.

* * *

As explained in greater detail hereinafter, the unique identifier may define one of a plurality of predetermined parameters, more specifically referred to as an identification parameter, utilized to establish *messaging communication with appropriate ones of a plurality of wireless communication devices 10.*

‘923 Patent at 4:56-5:6 & 6:37-42 (emphasis added). Indeed, two portions of the specification use “messaging communication” together with “data transmission” or “data communication” without any indication that those terms refer to different types of communications:

Operative features of the scanner capabilities of the present invention provide for preferably continuous scanning, wherein the first and second transceivers 19 and 21 are continuously searching to establish *messaging communication* between compatibly configured computers 20 and wireless communication devices 10. The scanning capabilities are completed when, for example, one of the plurality of wireless communication devices 10 wanders within the pre-established vicinity range of the piconet 24 and includes a

unique identifier or code which is recognizable by the first transceiver 19 associated with the computer 20. Upon recognition and when all the pre-determined parameters have been met, *messaging communication* between the computer 20 and the one or more wireless communication devices 10 is established. The communication system and method of the present invention also includes selective configuration capabilities which allows a user to configure his account to regulate *data transmission* to a particular wireless communication device.

* * *

Turning to FIG. 2, and by way of example only, a method of operation and utilization of the communication system of the present invention is illustrated. More specifically, in operation any one of the plurality of wireless communication devices 10 is activated as at 30 and, through operation of the continuous scanning capabilities, as set forth above, a first and second transceiver 19 and 21, associated with the transceiver assembly of the present invention, provide for a “find-me-follow-me” procedure in an *attempt to recognize one another and establish messaging communication*, as at 32. . . . [A]ssuming that the wireless communication device 10 locates an Internet access facility or computer as at 36, it is next determined, through operative features of the transceiver assembly and combined features of the scanning assembly, whether the computer 20 is configured to *recognize and communicate* with the wireless communication device 10, as indicated as 38. * * * [I]f computer 20 is configured to access the computerized network 12, *data communication is thereby established* as at 46, wherein *voice, video, alphanumeric or other data may be sent or received by virtue of the piconet 24, over the computerized network 12, utilizing the network service provider 15*.

Id. at 7:18-36 & 7:42-8:18; see *Innova/Pure Water*, 381 F.3d at 1120 (“[W]e must conclude that this is simply a case where the patentee used different words to express similar concepts, even though it may be confusing drafting practice.”); *Tehrani v. Hamilton Med., Inc.*, 331 F.3d 1355, 1361 (Fed. Cir. 2003) (finding that “intrinsic evidence indicates that the patentee meant for [the] two terms [‘indicative of’ and ‘representing’] to be interchangeable and to carry the same meaning within the claims”).

At the September 10, 2012 hearing, T-Mobile emphasized disclosure in the Summary of the Invention that “[t]his invention is directed to a system and method of hybrid communication which provides data communication including, but not limited to, voice, video and/or alphanumeric messaging.” ‘923 Patent at 2:21-24. T-Mobile thus apparently reads the word “messaging” to be modified only by the word “alphanumeric.” Yet, this disclosure could just as easily be read such that messaging is also modified by “voice” and “video” so as to disclose “voice [messaging], video [messaging] and/or alphanumeric messaging.”

T-Mobile also cited disclosure in the Description of the Related Art about the need for “integration or cross-over” of communications technology, wherein “improved technology could include a hybrid communication system which will operate using standard flex paging protocol in combination with Bluetooth or similar technology for short range messaging.” *Id.* at 1:55-65. T-Mobile concludes that because the well-known “flex” paging protocol is limited to alphanumeric messaging, “messaging communication” must be alphanumeric and is thus merely a subset of “data communication.” Yet, it is not at all clear that the phrase “for short range messaging” modifies both the phrase “Bluetooth or similar technology” and the phrase “standard flex paging protocol” rather than only the “Bluetooth” phrase. Because Bluetooth is not limited to alphanumeric data, the reference to “Bluetooth or similar technology for short range messaging” could just as well be read to support construing “messaging communication” to mean “data communication.”

On balance, these passages relied upon by T-Mobile at the hearing fail to overcome the weight of the other disclosures as well as the context of claims 11-15. Based on the claims and the written description, discussed above, the Court concludes that the claims of the ‘923 Patent

use “messaging communication” and “data communication” synonymously. Finally, T-Mobile’s proposal to limit the disputed term to “alphanumeric” data should be rejected because neither the claims nor the written description justify imposing any restriction on the type of data communication. The Court therefore construes “**messaging communication**” to mean “**data communication.**”

J. “Internet access facility” & “Internet access facilities” (Claims 6-9 & 11-15)

Plaintiffs’ Proposed Construction	T-Mobile’s Proposed Construction
The Court should resolve the parties’ dispute over this language by ruling as follows: This phrase does not require or exclude computer(s) configured by the appropriate programming of the first and second transceivers to access the Internet.	Plain meaning

T-Mobile originally proposed this term means: “Computer(s) configured by the appropriate programming of the first and second transceivers to access the Internet.” Joint Claim Construction and Prehearing Statement, Dkt. No. 167, Attach. 2 at 19. Plaintiffs originally proposed that no construction is necessary. Dkt. No. 201 at 6. In its response brief, “T-Mobile believe[d], after reviewing Plaintiffs’ brief, that there is no real dispute as to ‘a computer configured for computerized network access’ or ‘Internet Access Facility,’ and therefore agree[d] that those terms do not require construction.” Dkt. No. 213 at 5 n.1. In reply, Plaintiffs now request a ruling that the construction originally proposed by T-Mobile is *not* a limitation. Dkt. No. 220 at 7. Plaintiffs present no substantive argument, but request that T-Mobile’s prior proposed construction be “not require[d] or exclude[d]” from the term. Dkt. No. 220 at 8. At the September 10, 2012 hearing, T-Mobile stated that it does not intend to assert that this claim term

requires a computer configured by the appropriate programming of the first and second transceivers to access the Internet.

The Court accordingly construes “**a computer configured for computerized network access**” to have its plain and ordinary meaning. The Court finds that the term does not require “a computer configured by the appropriate programming of the first and second transceivers to access the Internet.”

K. “scanner capability” (Claims 7-9)

Plaintiffs’ Proposed Construction	T-Mobile’s Proposed Construction
No construction necessary — plain meaning. Alternatively, “ability to operate as a scanner to allow for recognition of or between compatible devices or components”	“capability to scan to allow for mutual recognition of one of each of a plurality of first and second transceivers” ⁶

Plaintiffs argue that T-Mobile’s proposal of including “first and second transceivers” violates the doctrine of claim differentiation as to claims 7 and 8. Dkt. No. 201 at 24.⁷ Plaintiffs submit instead that the recognition need not be mutual and can be between any devices or components. *Id.*

T-Mobile responds that Plaintiffs’ alternative proposed construction is overbroad and ambiguous and that “[t]he specification makes clear that the scanning capability pertains specifically to the transceiver assembly.” Dkt. No. 213 at 21 (citing ‘923 Patent at 3:57-61, 6:24-34 & 7:17-21). T-Mobile concludes that “it is the transceivers that conduct the scan and

⁶ T-Mobile previously proposed this term means: “Capability to scan to allow for mutual recognition of the first and second transceivers.” Dkt. No. 167, Attach. 2 at 22.

⁷ Plaintiffs also note that claim 6, from which claims 7-9 depend, recites “a plurality of first transceivers” and a “plurality of second transceivers.” *Id.* Plaintiffs’ concern in this regard has been addressed by T-Mobile’s revised proposed construction.

mutually recognize each other—not some unspecified components, as Plaintiffs assert.” *Id.* at 22. As to Plaintiffs’ claim differentiation argument, T-Mobile notes that claim 8 is differentiated from claim 7 by the recitation of “continuous searching.” *Id.* Plaintiffs reply that it is unclear what “each” means in T-Mobile’s proposal and that there is no requirement for “mutual” recognition. Dkt. No. 220 at 13.

Although Plaintiffs argue that this term should not be construed, the briefing demonstrates that the parties have a “fundamental dispute regarding the scope of a claim term,” and the Court has a duty to resolve the dispute. *O2 Micro*, 521 F.3d at 1362-63. As to Plaintiffs’ claim differentiation argument, claims 7 and 8 recite (emphasis added):

7. A system as recited in claim 6 wherein said transceiver assembly includes a *scanner capability*.

8. A system as recited in claim 7 wherein *said scanner capability* is structured to provide continuous searching by at least one of said first plurality of transceivers or said second plurality of transceivers for the other and establish communication there between, when a corresponding one of said plurality of wireless communication devices is within said pre-established vicinity range of said plurality of Internet access facilities.

Given the recitation of “continuous searching” in claim 8, that claim can be differentiated from claim 7 based on matter other than that which Plaintiffs seek to exclude from the construction of “scanner capability.” In other words, the mutuality (“there between”) and the pluralities (“by at least one of said first plurality of transceivers or said second plurality of transceivers for the other”) cited by Plaintiffs are not the only features of claim 8 that differentiate it from claim 7. Plaintiffs’ claim differentiation argument is therefore rejected. *See Wenger*, 239 F.3d at 1233 (“Claim differentiation, while often argued to be controlling when it does not apply, is clearly applicable when there is a dispute over whether a limitation found in a dependent claim should

be read into an independent claim, *and that limitation is the only meaningful difference between the two claims.*” (emphasis added).⁸

As to the proper construction, claim 7, from which claims 8 and 9 depend, recites “wherein said transceiver assembly includes a scanner capability.” Claim 7 depends from claim 6, in which the transceiver assembly is recited as “comprising a plurality of first transceivers each connected to a different one of said Internet access devices and a plurality of second transceivers each connected to a different one of said plurality of wireless communication devices.” The claims themselves thus support T-Mobile’s proposal that the first and second transceivers have the “scanner capability” and scan for one another. The specification’s description of “the present invention” further supports T-Mobile’s proposal:

The communication system and method of *the present invention also incorporates scanner capabilities, which is more specifically incorporated within the aforementioned transceiver assembly.* Operative features of the *scanner capabilities of the present invention* provide for preferably continuous scanning, wherein the *first and second transceivers 19 and 21 are continuously searching* to establish messaging communication between compatibly configured computers 20 and wireless communication devices 10.

‘923 Patent at 7:15-23; *see, e.g., Verizon Servs. Corp. v. Vonage Holdings Corp.*, 503 F.3d 1295, 1308 (Fed. Cir. 2007) (“When a patent thus describes the features of the ‘present invention’ as a whole, this description limits the scope of the invention.”).

⁸ Plaintiffs also cite *MASS Engineered Design, Inc. v. Ergotron, Inc.*, but Ergotron simply noted: “Claim differentiation . . . is clearly applicable when there is a dispute over whether a limitation found in a dependent claim should be read into an independent claim, and that limitation is the *only meaningful difference between the two claims.*” 559 F. Supp. 2d 740, 754 (E.D. Tex. 2008) (Davis, J.) (quoting *Wenger*, 239 F.3d at 1233) (emphasis added).

The Court therefore hereby construes “scanner capability” to mean “capability to scan to allow for mutual recognition of one of each of a plurality of first transceivers and a plurality of second transceivers.”

L. “conducting a scan” (Claim 14)

Plaintiffs’ Proposed Construction	T-Mobile’s Proposed Construction
No construction necessary — plain meaning. Alternatively, “scanning to allow for recognition of or between compatible devices or components”	“scanning to allow for mutual recognition of one of each of a plurality of first and second transceivers” ⁹

Plaintiffs argue that T-Mobile’s proposal to limit recognition to “a plurality of first and second transceivers” should be rejected because “the claims expressly allow for the recognition of other devices, properties or components as well.” Dkt. No. 201 at 25. T-Mobile responds to this term collectively with the terms “scanner capability” and “scanning capability.” *See* Dkt. No. 213 at 20-22. Plaintiffs reply that it is unclear what “each” means in T-Mobile’s proposal, that there is no requirement of “mutual” recognition, and that claim 14 does not require pluralities of transceivers, as T-Mobile proposes. Dkt. No. 220 at 13.

Although Plaintiffs argue that this term should not be construed, the briefing demonstrates that the parties have a “fundamental dispute regarding the scope of a claim term,” and the Court has a duty to resolve the dispute. *O2 Micro*, 521 F.3d at 1362-63. The term “conducting a scan” appears in claim 14. T-Mobile’s proposal of a “plurality of first and second transceivers” is rejected because neither claim 14 nor claim 11, from which claim 14 depends,

⁹ T-Mobile previously proposed this term means: “Scanning to allow for mutual recognition of the first and second transceivers.” Dkt. No. 167, Attach. 2 at 25.

recites a plurality of transceivers or transceiver assemblies. Instead, claims 11 and 14 recites a “wireless communication device” and an “Internet access facility.”

The Court accordingly hereby construes “**conducting a scan**” to mean “**scanning to allow for mutual recognition between the wireless communication device and the Internet access facility.**”

M. “scanning capability” (Claims 24-25)

Plaintiffs’ Proposed Construction	T-Mobile’s Proposed Construction
No construction necessary — plain meaning. Alternatively, “capability to allow for recognition of or between compatible devices or components”	“capability to scan to allow for mutual recognition of one of each of a plurality of first and second transceivers” ¹⁰

The parties rely on the same arguments made with respect to the terms “conducting a scan” and “scanner capability” to support their respective constructions. *See* Dkt. No. 201 at 26-27; Dkt. No. 213 at 20-22; Dkt. No. 220 at 14. Aside from the fact that claim 24 recites “a first transceiver” and “a second transceiver” instead of reciting a plurality of transceivers as in the case of claims 7-9, the Court finds that the same analysis applies to this claim term. Accordingly, Court construes the term “**scanning capability**” to mean “**capability to scan to allow for mutual recognition between the first transceiver and the second transceiver.**”

¹⁰ T-Mobile previously proposed this term means: “Capability to scan to allow for mutual recognition of the first and second transceivers.” Dkt. No. 167, Attach. 2 at 27.

N. “continuous searching” (Claims 8 & 24-25)

Plaintiffs’ Proposed Construction	T-Mobile’s Proposed Construction
No construction necessary — plain meaning	“searching that is uninterrupted and without cessation”

Plaintiffs argue that T-Mobile’s proposal would exclude the preferred embodiments, which disclose “substantially continuous” searching and reactivation of searching, and is “so narrow[] as to create a device that is physically and practically impossible and impractical.” Dkt. No. 201 at 27-28 (citing ‘923 Patent at 3:56-67, 7:18-23, 8:23-42 & Fig. 2). In particular, Plaintiffs submit that “[i]n the event that either an appropriate Internet access facility or an appropriate over-the-air network [is] found, then the example process, as depicted in Figure 2, would not need to search ‘uninterrupted[ly] and without cessation’ as [T-Mobile] propose[s].” *Id.* at 29. Finally, Plaintiffs argue that because the meaning of the term is clear from the intrinsic evidence, T-Mobile’s extrinsic dictionary definitions should be rejected. *Id.*

T-Mobile responds that “the patent discloses a system in which the transceivers search for each other in a manner that is uninterrupted and that does not end until either: (1) the transceivers have recognized each other or (2) the transceiver in the wireless device determines that it is not in range of an appropriately configured computerized network.” Dkt. No. 213 at 22; *id.* at 23 (citing ‘923 Patent at 7:18-21 & 8:18-21). T-Mobile also responds that Plaintiffs are confusing “searching” with the different term “scanning,” which is described as “*substantially* continuous” and which may be “re-activated if a connection is lost.” *Id.* (emphasis added). T-Mobile submits that “[o]nce the *scanning* has begun, however, the patent is clear that the *searching* performed by the transceivers is continuous (uninterrupted and without cessation) until communication can be established.” *Id.* (citing ‘923 Patent at 8:5-9 & 8:18-22) (emphasis

added). Finally, T-Mobile argues that “if ‘continuous’ did not mean without interruption or cessation, there would be no need to modify ‘continuous’ [(with the word “substantially”)] when referring to the scanning” in the specification. *Id.* at 24.

Plaintiffs reply that T-Mobile’s position is so extreme that “[b]y T-Mobile’s logic, a device that monitored something by emitting an output or signal every 1,000th of a second, in perpetuity, could not be described as a ‘continuous’ monitor because of the periodic interruptions in its output.” Dkt. No. 220 at 14. In other words, Plaintiffs argue that T-Mobile’s proposed construction would exclude continuous but periodic searching.

Although Plaintiffs argue that this term should not be construed, the briefing demonstrates that the parties have a “fundamental dispute regarding the scope of a claim term,” and the Court has a duty to resolve the dispute. *O2 Micro*, 521 F.3d at 1362-63. In particular, the parties dispute whether “continuous” excludes any pause or interruption. The disputed term appears in claims 8 and 24, which recite, in relevant part (emphasis added):

8. A system as recited in claim 7 wherein said scanner capability is structured to provide *continuous searching* by at least one of said first plurality of transceivers or said second plurality of transceivers for the other and establish communication there between, when a corresponding one of said plurality of wireless communication devices is within said pre-established vicinity range of said plurality of Internet access facilities.

* * *

24. A hybrid communication system for wireless data communication said system comprising:

...

d) said transceiver assembly including a first transceiver connected to said computer and at least a second transceiver connected to said wireless communication device and an auto-switching capability responsive to pre-determined parameters, [and]

...

g) said transceiver assembly including a scanning capability, said scanning capability structured to provide *continuous searching* by

at least one of said first or second transceivers for the other of said transceivers and establish communication there between when said wireless communication device is within said pre-established vicinity range.

In particular, the recitation in claim 24 of “said scanning capability structured to provide continuous searching,” which uses the different terms “scanning” and “searching” within six words of each other, suggests that “scanning” and “searching” are not used interchangeably. *Bancorp Services*, 359 F.3d at 1373 (“[U]se of [two] terms in close proximity in the same claim gives rise to an inference that a different meaning should be assigned to each.”). Unlike the term “messaging communication” discussed in subsection I., here the presumption has not been rebutted. The specification provides additional supporting context (emphasis added):

Operative features of the *scanner capabilities* of the present invention provide for preferably *continuous scanning*, wherein the first and second transceivers 19 and 21 are *continuously searching* to establish messaging communication between compatibly configured computers 20 and wireless communication devices 10. The *scanning capabilities* are completed when, for example, one of the plurality of wireless communication devices 10 wanders within the pre-established vicinity range of the piconet 24 and includes a unique identifier or code which is recognizable by the first transceiver 19 associated with the computer 20.

[A]ssuming compatible configuration between the computer 20 and the wireless communication device 10 as indicated at 40, it is determined whether the computer 20 is configured to allow the particular wireless communication device 10 to access the Internet 12 as at 42. If the computer 20 is not so configured, then the *scan capability is operative to continue searching* for a computer which is compatible to the extent of allowing data communication to be established with the particular wireless communication device.

...
If the connection is lost as at 48, the auto-switching capability returns to the scanning capabilities as at 49, 44 to *continuously search* for a compatible Internet access facility or computer 20 or alternatively switches to communication with an over-the-air network, as at 34.

‘923 Patent at 8:1-9 & 8:18-22. Because “scanning” and “searching” are not used interchangeably, the Court rejects Plaintiffs’ reliance on the disclosures that “scanning . . . may occur on a *substantially* continuous basis” and that “the continuous scanning facility [is] reactivated” if an over-the-air network is not found. *Id.* at 3:65-67 & 8:31-34 (emphasis added).

On balance, the claims and the specification disclose that the significance of the searching being continuous is that searching continues until a connection with a computer is established or until the searching transceiver determines that no other appropriately configured transceiver is available. *See* ‘923 Patent at 8:1-9. Such a reading also comports with the dictionary definitions submitted by T-Mobile defining “continuous” as “uninterrupted in time; without cessation” and “uninterrupted in time or sequence; acting without interruption.” Dkt. No. 213 at 23 n.16; Ex. 9, *Webster’s New Universal Unabridged Dictionary* 440 (1996); Ex. 10, *The New Shorter Oxford English Dictionary* 495 (1993).

Plaintiffs’ concern that continuous but periodic activity would be excluded under T-Mobile’s proposed construction is not well founded because a person of ordinary skill in the art would understand that the requisite lack of interruption should be interpreted with reference to the manner of searching. In other words, to the extent that searching involves periodic events, such as periods of sending signals and waiting for replies, such periods of inactivity should not constitute an “interruption” or “cessation” under T-Mobile’s proposed construction.

At the September 10, 2012 hearing, the Court proposed construing “continuous searching” to mean “searching until either the transceivers have recognized each other or the searching transceiver determines that it is not in range of another appropriately configured transceiver.” Plaintiffs were agreeable to the Court’s preliminary construction, but Plaintiffs

requested clarification that there may be pauses during the searching activity, as their expert Dr. Tewfik suggested at his deposition:

A. . . . [H]ere continuous means that I am continuously periodically scanning. Meaning over an hour, I am every 10 seconds I'm scanning or every second I'm scanning. So every second I scan and I'm doing it continuously. I don't interrupt. But that doesn't mean during that one entire second, I am doing nothing but scanning.

Q. Okay. So then continuously -- so what does continuous mean then?

A. Continuous means that you are repeating this periodic scanning continuously.

...

A. It means that there is a periodic behavior that you are doing repeatedly.

Tewfik dep. at 121:3-13 & 122:3-4; *see also id.* at 122:22-123:3.

The Court asked T-Mobile whether it had any concerns about their being any “interruption” to the “continuous searching.” T-Mobile responded negatively but stated its desire to be clear about how the searching operates. In particular, T-Mobile proposed appending to the Court’s construction the phrase “and switches over to the over-the-air network.” T-Mobile argued that such a limitation is necessary to be consistent with the disclosure that if no appropriately configured transceiver is in range, then the wireless communication device uses the over-the-air network. *See* ‘923 Patent at 8:18-22 (“continuously search[es] for a compatible Internet access facility or computer 20 or alternatively switches to communication with an over-the-air network, as at 34 [in Figure 2]”); *see also id.* at 8:1-12 (“[I]f no computer can be located, the auto-switching capability is again operative to transfer data communication to an appropriate or compatible over-the-air network 14, as at 44 [in Figure 2].”). Ultimately, T-Mobile stated that

the Court's preliminary construction, while not the best construction in T-Mobile's view, would be acceptable to T-Mobile.

The Court therefore adopts its proposed construction. In addition, the intrinsic evidence and Dr. Tewfik's opinion establish that the word "continuous" in the term "continuous searching" does not preclude periodic cessations that may be a necessary or desirable attribute of the hardware, software, or protocols involved in carrying out the searching. To resolve the parties' dispute and to minimize the potential for confusion, the Court omits T-Mobile's proposal of "uninterrupted" from the construction and also notes separately that the term does not exclude periodic cessations. The Court therefore construes "**continuous searching**" to mean "**searching until either the transceivers have recognized each other or the searching transceiver determines that it is not in range of another appropriately configured transceiver.**"

O. "wireless communication device comprising a pager assembly" (Claims 16-23)

Plaintiffs' Proposed Construction	T-Mobile's Proposed Construction
No construction necessary — plain meaning. Alternatively, "wireless communication device comprising hardware and software necessary for numeric and/or alphanumeric communication"	"a pager including hardware and software necessary to operate using standard paging protocols" ¹¹

Plaintiffs argue that T-Mobile's proposal imports limitations from the specification and relies heavily on extrinsic evidence. Dkt. No. 201 at 30. At the September 10, 2012 hearing, Plaintiffs further explained that the "pager assembly" can utilize a cellular network because

¹¹ T-Mobile previously proposed that this term means "a pager including hardware and software necessary to operate using standard flex paging protocol." See Dkt. No. 201 at 30; Dkt. No. 213 at 24 n.17 ("T-Mobile has revised its proposed constructions to address the fact that although the 'flex' paging protocol was the standard paging protocol at the time the patent was written, and is the only paging protocol disclosed in the patent, other paging protocols also exist.").

numeric and alphanumeric communication are simply subsets of data communication, which can occur over a cellular network. Plaintiffs urged that as technology has developed, the pager functionality that used to be found only in stand-alone pagers has now also been incorporated into other types of devices, such as cellular phones. Plaintiffs thus argue that text messaging through a cellular network, for example, would be encompassed by Plaintiffs' proposed construction.

T-Mobile responds that Plaintiffs are attempting to read what T-Mobile calls the "pager" claims on devices other than pagers, such as cellular telephones. Dkt. No. 213 at 24. In other words, T-Mobile argues, "Plaintiffs seek to read the paging terms to include every wireless communication device capable of alphanumeric¹² communication, rather than as devices only capable of alphanumeric communication." *Id.* T-Mobile notes disclosure in the specification of "'wireless communication device' to 'include a pager, cellular telephone, personal digital assistant (PDA) or other applicable wireless communication device[]'." *Id.* at 25 (citing '923 Patent at 2:30-32). T-Mobile also notes disclosure of cellular networks and paging networks as distinct and different from one another. *Id.* (citing '923 Patent at 5:1-3 & 8:28-30). As further evidence that pagers are a distinct class of wireless communication device, T-Mobile cites prosecution history in which the more general claims were rejected based on one piece of cellular telephone prior art (the "Forslow" reference) and the pager claims were rejected based on the cellular telephone prior art combined with pager prior art (Forslow combined with the "Kolls" reference). *Id.* Finally, T-Mobile invokes the doctrine of claim differentiation as to

¹² The parties have not disputed the meaning of "alphanumeric," which the Court generally understands to refer to the use of numbers and letters.

claims 1 and 16, arguing that “Plaintiffs’ improper construction of the pager limitation to include every wireless communication device capable of alphanumeric communication would render claims 1 and 16 identical, among other redundancies, and thus should be rejected.” *Id.* at 26.

Plaintiffs reply that “[t]he doctrine of ‘claim differentiation’ cannot properly be applied to require that each claim of a particular patent have no limitation in common with any other claim.” Dkt. No. 220 at 16. Moreover, Plaintiffs argue, “[w]here a wireless communication device may or may not be capable of alphanumeric communication, using the term ‘pager’ in one claim to refer to wireless communication devices that are capable of such communication would not produce identical scope with the term ‘wireless communication device’ in another claim.” *Id.* Plaintiffs conclude that the Court should reject “T-Mobile’s attempts to exclude from the term ‘pager’ more modern devices that can function as a pager while also being capable of other functions.” *Id.* at 15.

Although Plaintiffs argue that this term should not be construed, the briefing demonstrates that the parties have a “fundamental dispute regarding the scope of a claim term,” and the Court has a duty to resolve the dispute. *O2 Micro*, 521 F.3d at 1362-63. The parties agreed that the constituent term “wireless communication device” means “a pager, cellular telephone, personal digital assistant (PDA) or other applicable wireless communication device structured and designed to perform data communication.” Dkt. No. 167, Attach. 1.

Claims 17-23, in which the disputed term appears, depend from claim 16, which recites (emphasis added):

16. A hybrid communication system for wireless data communication said system comprising:

- a) a wireless communication device including a unique identifier and capable of conducting data communication through an over-the-air network,
- b) a computer configured for computerized network access,
- c) a transceiver assembly operative on a short range communication standard and structured to interconnect said wireless communication device and a computer facility to establish data communication therewith,
- d) said transceiver assembly including a first transceiver connected to said computer and at least a second transceiver connected to said wireless communication device and an auto-switching capability responsive to pre-determined parameters,
- e) said auto-switching capability being determinative of data communication with said wireless communication device either over the computerized network through said computer facility or by the over-the-air network dependent on the establishment of said predetermined parameters,
- f) at least one of said predetermined parameters comprising a pre-established vicinity range, and
- g) *said wireless communication device comprising a pager assembly including multi-line communication capabilities operable on at least two independent frequency ranges.*

Outside of the claims, the constituent term “pager” appears only three times in the specification (emphasis added):

The wireless communication device, as set forth above, may include a *pager*, cellular telephone, personal digital assistant (PDA) or other applicable wireless communication devices structured and designed to perform data communication.

* * *

Such wireless communication devices may of course include a *pager* assembly, cellular telephone, PDA, etc.

* * *

As set forth above, the over-the-air network may be defined by appropriate cellular/*pager* infrastructure, including server 18 or other communication networks such as, but not limited to, satellite communication 17 and others.

‘923 Patent at 2:29-33 (Summary of the Invention), 4:59-61 (Detailed Description of the Preferred Embodiment) & 7:10-14 (same).

The related word “paging” appears seven times, six of them with reference to a “cellular/paging network” or a “cellular[] or paging network.” *Id.* at 2:27-28, 3:34-35, 3:53-54, 5:2-3, 7:56-57 & 8:29-30. The remaining reference, which appears in the Background of the Invention, discloses that “improved technology could include a hybrid communication system which will operate using standard flex *paging* protocol in combination with Bluetooth or similar technology for short range messaging.” *Id.* at 1:61-65 (emphasis added). These various disclosures provide no clear definition but do suggest that pagers and cellular telephones operate on different types of networks, as evident from the repeated use of “cellular/paging network” as cited above. In other words, if cellular and pager networks were functionally the same or if the type of network were inconsequential, one would expect the patent to use a single term, such as perhaps “data network,” to describe the network. Alternatively, one might expect to find an explanation that cellular networks and paging networks are interchangeable for purposes of the invention. The ‘923 Patent contains no such disclosure.

As submitted by T-Mobile and as is evident to any user, pagers and cellular telephones operate differently from one another. T-Mobile submits extrinsic evidence to this effect from a treatise:

paging.

Most current paging systems have the property that they are one-way systems, from a single computer out to a large number of receivers. There is no problem about who will speak next, and no contention among many competing users for a small number of channels as there is only one sender in the whole system.

Paging systems require little bandwidth since each message requires only a single burst of perhaps 30 bytes. At this data rate, a 1-Mbps satellite channel can handle over 240,000 pages per minute. The older paging systems run at various frequencies in the 150–174 MHz band. Most of the modern ones run in the 930–932 MHz band. Figure 2-53(a) shows the one-way nature of a paging system, with all communication being outbound at a single frequency. We will later see how this mode contrasts with mobile telephones, which are two way and use two frequencies per call, with different frequency pairs used for different calls, as depicted in Fig. 2-53(b). These differences make the paging system much simpler and less expensive to operate.

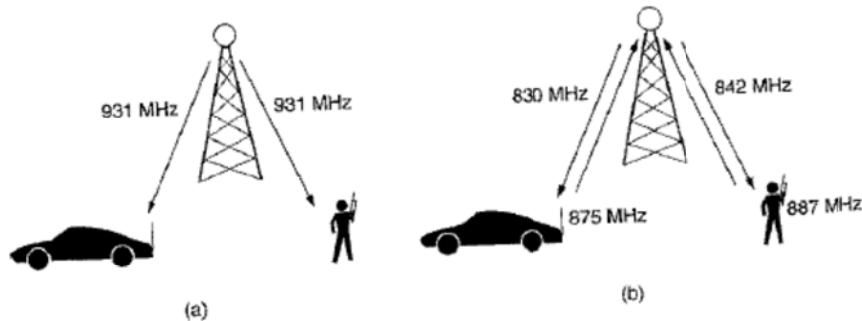


Fig. 2-53. (a) Paging systems are one way. (b) Mobile telephones are two way.

Dkt. No. 214, Ex. 12, Andrew S. Tanenbaum, *Computer Networks* 156 (3d ed. 1996).

Admittedly, the '923 Patent contemplates two-way messaging under at least some circumstances, as expressly recited in claim 21. But regardless, T-Mobile urges that pagers are different than cellular telephones and operate on a different type of network such that the pager claims cannot be read on cellular telephones. Dkt. No. 213 at 25.

On balance, T-Mobile has failed to show that the term should be so limited. In particular, the constituent term “comprising,” as in “comprising a pager assembly,” is open-ended. Cf. *Gillette Co. v. Energizer Holdings, Inc.*, 405 F.3d 1367, 1371 (Fed. Cir. 2005) (“The word ‘comprising’ transitioning from the preamble to the body signals that the entire claim is presumptively open-ended.”); *MagSil Corp. v. Hitachi Global Storage Techs., Inc.*, 687 F.3d

1377, 2012 WL 3289973, at *5 (Fed. Cir. Aug. 14, 2012). In other words, the term “wireless communication device comprising a pager assembly” requires a “pager assembly” but does not limit the wireless communication device to being only a “pager,” as T-Mobile proposes.

As to T-Mobile’s claim differentiation argument regarding independent claims 1 and 16, “[b]eyond the independent/dependent claim scenario, [the Federal Circuit] has characterized claim differentiation . . . as the presumption that each claim in a patent has a different scope.” *Curtiss-Wright*, 438 F.3d at 1380 (citation and internal quotation marks omitted). Claim 16 differs from claim 1 in that claim 16 recites: “said wireless communication device comprising a pager assembly including multi-line communication capabilities operable on at least two independent frequency ranges.” This limitation contains more than simply the “pager assembly” limitation, requiring in addition the “multi-line communication capabilities.” *See Wenger*, 239 F.3d at 1233 (“Claim differentiation, while often argued to be controlling when it does not apply, is clearly applicable when there is a dispute over whether a limitation found in a dependent claim should be read into an independent claim, *and that limitation is the only meaningful difference between the two claims.*”) (emphasis added). In addition, the device may have other features and functionality as well, particularly in light of the above-cited disclosures in the specification of a wide range of devices and of “cellular/paging” networks. T-Mobile’s claim differentiation argument is therefore rejected. *Edwards Lifesciences LLC v. Cook Inc.*, 582 F.3d 1322, 1331 (Fed. Cir. 2009) (“[C]laim differentiation is a rule of thumb that does not trump the clear import of the specification.”).

Nonetheless, as to the meaning of the constituent term “pager,” Plaintiffs’ proposal of “hardware and software necessary for numeric and/or alphanumeric communication” is

overbroad and could potentially encompass any communication network and a vast array of functionalities, such as e-mail and text messaging, regardless of how implemented. At the September 10, 2012 hearing, Plaintiffs urged that a person of ordinary skill in the art would understand the term “pager assembly” to refer to a functionality that could be incorporated in various types of devices. Indeed, based on the recitation in claim 16 of a “wireless “communication device *comprising* a pager assembly,” one could envision a device capable of interacting with both a cellular network and a pager network. *Cf. Gillette*, 405 F.3d at 1371 (“The word ‘comprising’ transitioning from the preamble to the body signals that the entire claim is presumptively open-ended.”). Plaintiffs have failed to show, however, that “pager” functionality can be achieved on a cellular network. Rather, the specification consistently refers to paging networks as distinct from cellular networks, as quoted above, and the above-reproduced treatise excerpt submitted by T-Mobile explains the well-known distinction. The patentee did not, in the written description or the prosecution history, imbue the term “pager” with any specialized meaning to the contrary. In sum, the intrinsic and extrinsic evidence together are persuasive that “pager” is a term of art that describes a type of network that is distinct from cellular networks. The disputed term should therefore be limited to standard paging protocols, as T-Mobile has proposed.¹³ To ensure this is clear, the Court further notes that a “pager assembly” does not use a cellular network or cellular protocol.

The Court therefore hereby construes **“wireless communication device comprising a pager assembly”** to mean **“wireless communication device that includes hardware and**

¹³ At the September 10, 2012 hearing, T-Mobile had no objection to the Court’s suggestion of removing the word “standard” from T-Mobile’s proposal of the phrase “using standard paging protocols.”

software necessary to operate using a paging protocol.” The Court also finds that both the intrinsic and extrinsic evidence show that paging protocols and networks are distinct from cellular protocols and networks and that therefore a “pager assembly” does not use a cellular protocol or cellular network.

P. “alphanumeric pager” (Claim 23)

Plaintiffs’ Proposed Construction	T-Mobile’s Proposed Construction
No construction necessary — plain meaning. Alternatively, “hardware and software necessary for alphanumeric communication”	“a pager including hardware and software necessary to operate using standard paging protocols and capable of receiving alphanumeric messages”

Plaintiffs and T-Mobile address this term together with their arguments on the term “wireless communication device comprising a pager assembly,” discussed in subsection O., above. *See* Dkt. No. 201 at 32; Dkt. No. 213 at 24-26; Dkt. No. 220 at 14-16. Although Plaintiffs argue that this term should not be construed, the briefing demonstrates that the parties have a “fundamental dispute regarding the scope of a claim term,” and the Court has a duty to resolve the dispute. *O2 Micro*, 521 F.3d at 1362-63. For the same reasons discussed as to the related term “wireless communication device comprising a pager assembly” in subsection O., the Court hereby construes **“alphanumeric pager”** to mean a **“wireless communication device that includes hardware and software necessary to operate using a paging protocol and that is capable of receiving alphanumeric messages.”** The Court also finds that both the intrinsic and extrinsic evidence show that paging protocols and networks are distinct from cellular protocols and networks and that therefore an “alphanumeric pager” does not use a cellular protocol or cellular network.

CONCLUSION

The Court adopts the above constructions. The parties are ordered that they may not refer, directly or indirectly, to each other's claim construction positions in the presence of the jury. Likewise, the parties are ordered to refrain from mentioning any portion of this opinion, other than the actual definitions adopted by the Court, in the presence of the jury. Any reference to claim construction proceedings is limited to informing the jury of the definitions adopted by the Court.

SIGNED this 3rd day of December, 2012.



ROY S. PAYNE
UNITED STATES MAGISTRATE JUDGE